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Dr. Leidy read a paper from Mr. J. W. Dawson, of Pictou, N. S., entitled " On Fossil Coniferous wood from Prince Edward's Island;" which was referred to Dr. Leidy, Mr. Foulke and Mr. Isaac Lea.

Mr. Cassin presented a paper from W. Dudley, Esq., of Madison, Wisconsin, describing a species of Crane found in Wisconsin, and presumed to be new; which was referred to Mr. Cassin, Col. McCall and Dr. Wilson.

Mr. Cassin also presented two papers from Dr. Alfred T. King, of Greensburg, Pennsylvania, severally entitled "Description of fossil trees found in the Coal Rocks near Greensburg, Pa.," and " Description of a fossil Fruit found in the carboniferous rocks of Beaver Co., Penn.;" both of which were referred to Mr. Cassin, Mr. Aubrey H. Smith and Dr. Bridges.

Dr. Leidy exhibited drawings representing lateral and inferior views of the restored skull of Oreodon Culbertsonii, from the Eocene of Nebraska.

April 18*th.*

WM. PARKER FOULKE, Esq., in the Chair.

A letter was read from Dr. Charles Enderlin, of New York, dated 31st March, 1854, acknowledging the receipt of his notice of election as a Correspondent.

A letter was also read from the Lyceum of Nat. History of New York, dated April 4th, 1854, acknowledging the receipt of late Nos. of the Proceedings.

Mr. Cassin presented a paper for publication in the Proceedings, entitled "Notes on Birds observed in Texas, and in the States of Neuva Leon, Tamaulipas and Coahuila, Mexico, with descriptions of new species; by D. N. Couch, U. S. Army." Referred to Dr. Le Conte, Mr. Cassin and Col. McCall.

Dr. Leidy exhibited a specimen of the restored upper jaw of the Titanotherium Proutii, of Nebraska.

April 25*th.*

Vice-President BRIDGES in the Chair.

The Committees to which were referred papers, read April 4th by Dr. Le Conte and Prof. S. F. Baird ; April 11th, by Mr. J. W. Dawson, of Pictou, N. S.; by Mr. Wm. Dudley, of Madison, Wisconsin; by Dr. Alfred T. King, of Greensburg, Pennsylvania; April 18th, by Lieut. D. N. Couch, U. S. A., severally reported in favor of publication in the Proceedings.

Synopsis of the species of Platynus and allied genera, inhabiting the United States.

By JOHN L. LE CONTE, M. D.

The species of the small group of Carabica, herein examined, are quite frequently so closely related, as to be with difficulty separated ; some synonymy too has been produced by the want of sufficient bibliographical knowledge on the part of those who have investigated these genera. To lessen in some degree the difficulty now resting over the subject, I have thought that a series of original descriptions of all the species known to me, based upon a careful comparison of their specific characters, might remove some of the obstacles encountered from the different style of the descriptions of different authors. I do it the more gladly, as an opportunity is thus afforded me of correcting many important errors into which I was led, in some of my earlier writings, by the haste and inexperience of youth, from the effects of which it falls to the lot of only the most favored of men to escape.

The reader will find, in some portions of this essay, a further development of the principle announced by me in a synopsis of Silphales, (Proc. Acad. 6, 275,) illustrated in a genus, of which the species are very numerous; these species form small groups, according to their respective affinities, and in general the limits of each species are marked by well defined organic differences. But in some of the groups, occur forms so closely allied as to present, with a large series of specimens, almost imperceptible differences, by which sets of specimens, at first sight readily recognized and separated, become linked together. These variations (in form, not color) are frequently seen to be constant in those found in one locality, and in the present condition of science, would seem to indicate positively the origin at different points, or at various points intermixed together, of organic forms, so closely related as not to present sufficient differences to be regarded as ordinary species.

Thus it is that Nature who, not only between her works, but between her processes, continually displays gradations of sublime harmony, reveals to us some of the steps between those genera in which absolutely distinct species are found in restricted localities, and those in which absolutely the same species are found widely distributed.

The genera known to me with the exception of a single new one, have been fully described in other works, and may be thus arranged:

Mentum dente bicuspi; ungues plus minusve serrati:	
Paraglossæ ligula non longiores	Calathus.
Paraglossæ longiores, ultra ligulam extensæ . .	Pristodactyla.
Mentum dente simplici; ungues simplices:	
Paraglossæ ligula longiores	Anchus.
Paraglossæ ligula non longiores:	
Antennæ articulo 3io sequente sesqui longiore .	Rhadine.
Antennæ articulo 3io sequente subæquali . .	Platynus.
Mentum dente nullo	Olisthopus.

CALATHUS Bon.

1. C. gregarius, longiusculus, piceus, nitidus, apterus, thorace latitudine fere longiore antice subangustato, lateribus testaceis late rotundatis, margine postice latiore reflexo, basi utrinque paulo impresso, elytris striis tenuibus profundis, punctis tribus impressis, antennis palpis pedibusque testaceis. Long. ·4.

Dej. Sp. Gen. 3, 76; Kirby, Fauna Bor. Am. 29.

Feronia gregaria Say, Trans. Am. Phil. Soc. 2, 47.

Calathus distinguendus Lec. Proc. Acad. Nat. Sc. 2, 53. Ann. Lyc. 4, 216.

A common species in the Middle and Eastern States, and is found occasionally at Lake Superior. The North American species of this genus are very closely allied, and seem hardly worthy of being separated; nevertheless, the three species recognized by me in the Atlantic portion of the continent, are as well distinguished from each other as from those of the Pacific coast. This one will be readily recognized by the shining lustre and the moderately broad reflexed lateral margin of the thorax; in the next species the lateral margin is narrower, perceptibly depressed, and not at all reflexed towards the posterior angles. For authentic specimens of this species I am indebted to Dr. Harris.

2. C. confusus, longiusculus, piceus pernitidus, apterus, thorace latitudine sublongiore, antice subangustato, lateribus testaceis late rotundatis margine angusto postice vix depresso, subreflexo, basi utrinque paulo impresso, elytris

striis tenuibus profundis, punctis tribus impressis, antennis palpis pedibusque testaceis. Long. ·31—·35.

Lake Superior; abundant. Very similar to the preceding, but a little narrower in its form, and with the lateral margin of the thorax not distinctly wider towards the posterior angles, and less reflexed.

3. C. opaculus, longiusculus, piceus, thorace latitudine non longiore, antice subangustáto, lateribus testaceis latius subdepressis, non reflexis, basi utrinque paulo impresso, elytris fere opacis, striis tenuibus haud profundis, punctis tribus impressis, antennis palpis pedibusque testaceis. Long. ·35—·42.

Middle, Southern and Western States; rare. This species, with the form of C. gregarius, has the dull elytra and finely impressed striæ of C. ruficollis; it seems also sufficiently distinct from the preceding species, by the sides of the thorax being depressed, broader behind and not reflexed.

4. C. quadricollis, longiusculus, piceus, apterus, thorace latitudine non breviore, antice vix angustato utrinque subimpresso, elytris fere opacis, striis tenuibus non profundis, punctis 3 vel 4 impressis, antennis palpis pedibusque testaceis. Long. ·27—·4.

San Francisco, California. This species is narrower than C. ruficollis, and is readily distinguished by the form of the thorax; the thorax and head have a reddish tinge, but do not appear ever to reach the deep, dull rufous color observed in C. ruficollis.

5. C. ruficollis, latiusculus, piceus, apterus, capite thoraceque piceo-rufis, hoc latitudine breviore, antice angustato, lateribus (præsertim antice) rotundatis, margine minus distincte depresso subreflexo, basi utrinque subimpresso, elytris fere opacis striis tenuibus, punctis 3 impressis, antennis palpis pedibusque rufo-testaceis. Long. ·35—·4.

Dej. Sp. Gen. 3, 78; Mann. Bull. Mosc. 1843, 195.

San Francisco and San Diego. Considerably wider than any of the preceding species, and with the sides of the thorax anteriorly more rounded; the sides converge a little near the base, whereby the posterior angles are rendered less rectangular than in those above described. This species and the preceding, frequently subject travellers to great annoyance by crawling over their bodies at night, when sleeping on the ground; the multitudes which are seen in March and April, under every object capable of affording them shelter, are worthy of admiration.

6. C. obscurus, minus elongatus, piceus, apterus, thorace latitudine non breviore, antrorsum angustato, lateribus rotundatis (angulis basalibus obtusioribus) margine depresso subreflexo, basi utrinque subimpresso, elytris fere opacis, striis tenuibus non profundis, punctis tribus impressis, antennis palpis pedibusque rufo-testaceis. Long. ·4.

One female found in the Southern part of California. This species differs from C. ruficollis and C. quadricollis by the form of the thorax, which is not wider than long, considerably narrowed in front and moderately rounded on the sides, which are distinctly depressed even to the base, and hardly reflexed. The elytra are more distinctly wider than the thorax, but otherwise are formed and sculptured as in C. ruficollis.

PRISTODACTYLA Dej.

1. P. impunctata, nigra, nitida, thorace leviter obovato, latitudine non breviore angulis posticis rotundatis, lateribus margine anguste reflexo, basi utrinque late foveato, elytris thorace latioribus, pone medium paulo dilatatis, striis profundis, bipunctatis, antennis palpis pedibusque rufis, unguibus valde serratis. Long. ·35—·42.

Lec. Ann. Lyc. 4, 217.

Feronia impunctata Say, Trans. Am. Phil. Soc. 2, 45.

Pristodactyla americana Dej. Sp. Gen. 3, 83.

Middle States; rare. Smaller than the next, and distinguished by the thorax being more distinctly narrowed towards the base, and by the elytra being slightly dilated from the base to the posterior third.

I have great doubts of the propriety of separating this genus from Taphria; the very slight difference in the form of the last joint of the labial palpi, which is less dilated in the American species, is surely insufficient. From the difference in the form of the ungues, noticed in the species below, I am inclined to believe, that a natural arrangement would require all the genera (so called) of this group, in which the mentum tooth is emarginate, the paraglossæ longer than the ligula, and the ungues serrate, to be united into one genus. The species contained in Pristonychus, Pristodactyla and Taphria do not appear more different from each other than those embraced in Platynus.

2. P. corvina, nigra, nitida, thorace ovali, postice vix angustiore, latitudine non breviore, angulis posticis rotundatis, lateribus margine anguste reflexo, basi utrinque late foveato, elytris thorace latioribus postice non dilatatis, striis profundis, bipunctatis, antennis palpis pedibusque rufis, unguibus valde serratis. Long. ·46.

Lec. Ann. Lyc. 4, 217.

Pristonychus americanus Lec. Proc. Acad. Nat. Sc. 2, 52.

Pennsylvania and Georgia; not common.

3. P. advena, nigra, subnitida, thorace subquadrato, postice subangustiore, lateribus rotundatis, margine subreflexo, angulis posticis obtusis rotundatis, basi utrinque late foveato, elytris thorace latioribus tenuiter striatis, bipunctatis, antennis pedibusque nigro-piceis, unguibus basi subtilius serratis. Long. ·36—·4.

Lec. Ann. Lyc. 4, 217.

Lake Superior; not rare on the northern shore; a specimen from the north-eastern boundary of Maine was kindly given me by Mr. Brevoort. More slender than any of the other species here described, and very similar in appearance to some of the smaller European Pristonychus. The mentum tooth is much less emarginate than in the preceding.

4. P. dubia, nigra, minus nitida, thorace obovato, postice magis angustato, angulis posticis obtusis, rotundatis, basi depressa utrinque subfoveata, elytris thorace latioribus subellipticis, tenuiter striatis bipunctatis, antennis pedibusque piceis, unguibus basi vix obsolete serrulatis. Long. ·48.

One specimen: New Mexico; collected by Mr. Fendler. The base of the thorax is only about two-thirds as wide as the apex; the dorsal line is fine, but the transverse impressions are well marked. The mentum tooth is narrow, and very slightly emarginate at the tip.

In these four species, the under surface of the tarsi is glabrous, and the outer margin of the two posterior pairs is deeply grooved. In my synopsis of Pterostichus (Journ. Acad. Nat. Sc., 2d ser., vol. 2) it will be seen that in closely allied species, the latter character is of little value. The same would seem to be the case in the present group, and no better proof is required than the remarks made by Baron Chaudoir, on the page immediately opposite that in which he insists strongly on the great assistance which is derived from it in distinguishing Calathus from Pristonychus. The real difference between the genera is precisely that so long ago made known by Erichson, viz., the length of the paraglossæ, which in Calathus do not extend beyond the ligula, while in Pristonychus (and likewise in Pristodactyla and Taphria) they are very distinctly elongated.

ANCHUS Lec.

Palpi tenues, acuminati, maxillares articulo ultimo paulo longiore; antennæ filiformes, articulo 1mo crassiore, et longiore; mentum dente medio simplici; ligula truncata, paraglossis angustis longioribus.

A curious insect, having very much the appearance of Diaphorus, but having the head less constricted posteriorly, and the elytra rounded at the apex; the thorax is long and cordate, almost turned into a pedicel at the base, with the impressions elongate and very narrow; the elytra are twice as wide as the thorax, oblong and convex, with the humeral angles rounded, and the apex scarcely sinuate; the striæ are deep and moderately punctured, the intervals are narrow, convex, and are each marked with a row of very fine punctures, from which proceed very short hairs.

The legs are moderately long, the anterior tibiæ scarcely dilated at the apex, with the emargination extending nearly to the middle; in the male the first three joints of the anterior tarsi are very slightly dilated, and furnished beneath with a few papillæ. The antennæ are very slightly thickened externally; the first three joints and the base of the fourth are smooth, but furnished with a few scattered hairs; the first is longer than the third, and somewhat thicker than in the other genera of this group. The paraglossæ are narrow, curved, and longer than the truncate ligula; the tooth in the emargination of the mentum is moderately large, and almost acute at the tip. The palpi are slender and moderately long; the last joint is elongate oval, and almost acute at the tip; that of the maxillary palpi is distinctly longer than the penultimate joint.

It seems by its characters closely to approach Stomis, but the mandibles are not so long and the labrum is not at all emarginate. By the structure of the anterior tibiæ as well as by the sexual characters, it evidently belongs to the present group.

1. A. **pusillus**, niger, nitidus, parce breviter pubescens, capite parce punctato, thorace latitudine longiore, convexo, cordato, postice constricto, angulis posticis rectis, disco obsoletius basi et apice distinctius punctatis, elytris thorace duplo latioribus oblongis convexis, profunde striatis interstitiis convexis uniseriatim punctulatis, piceis lateribus late rufescentibus, antennis palpis, pedibusque rufis. Long. ·25.

'*Stomis americanus* Lap.' Lec. Ann. Lyc. 4, 356.

Platynus pusillus, Harris, MSS.

Massachusutts, Dr. Harris; Illinois, Mr. Willcox. Finding in this insect many of the characters of Stomis, I was misled by the very poor description of Mr. Laporte, (Etudes Entom. 1, 72) with which it agrees as closely as could be expected, in every respect except size. Baron Chaudoir, as I have already observed in my synopsis of Pterostichus, (Journ. Acad. Nat. Sc., 2d ser., 2,) has since stated that Mr. Laporte's insect is *Feronia fastidita* Dej. Under these circumstances, the specific name adopted by me under error falls, and I take pleasure in giving to the insect the name under which it was communicated to me by Dr. Harris.

RHADINE Lec.

This genus only differs essentially from Platynus by the greater length of the third joint of the antennæ, which is one half longer than the fourth joint; the first joint is short, being about one-half longer than the second. The form of body is that of the first division of Platynus, but the margins of the thorax and elytra are more broadly reflexed, and the elytra are strongly sinuate at the apex; the antennæ and feet are also longer. These characters give the insect a considerable resemblance, in general appearance, to Anophthalmus.

1. R. **larvalis**, pallide rufo-picea, nitida, thorace cordato-ovali, postice valde angustato, valde reflexo-marginato, angulis posticis rectis, elytris fere ellipticis, dorso planiusculis, fortiter marginatis, apice sinuatis, obsolete striatis, subtiliter tripunctatis. Long. ·41.

Le Conte, Ann. Lyc. 4, 219.

One specimen (male) found near St. Louis, Missouri, was kindly given my by Dr. Engelmann. In the State of Ohio, Dr. Schaum procured a dark brownish black specimen, in which the sinus of the elytra was so strong, as to form on each side of the apex a tooth; the specimen was a female, but not having it before me for examination, I cannot determine whether the difference is to be regarded as sexual or specific.

PLATYNUS Bon. (emend. Brullé.)

Under this generic name I group, after the example of Mr. Brullé, those species upon which Bonelli formed his three genera, Platynus, Anchomenus, and Agonum. My reason for preferring for this assemblage of species the name Platynus, is merely, that such was the name chosen by Mr. Brullé, who was the first entomologist to perceive the necessity of merging the groups into one genus. Two years afterwards, Erichson proposed to call the assemblage of Bonelli's three genera by the name Anchomenus, alleging that Platynus was inapplicable to most of the species, and that it had, moreover, been employed (in the form Platyna) for a genus of Diptera; the first point, in the present state of nomenclature, need not occupy our attention; the second point is also without weight, since Platyna was proposed as a genus many years after the establishment of Platynus by Bonelli, and before it was shown that the latter genus included any other form than that to which it was limited by the author. The name Platynus was consequently not vacant, and its application in any form, to a genus other than that intended by Bonelli was improper.

This genus, as here understood, contains a very large number of species, all agreeing in having the paraglossæ scarcely longer than the ligula; the mentum tooth distinct and not emarginate; the palpi slender, with the last joint about equal to the preceding; the first joint of the antennæ moderately thick, not longer than the third, which again is not longer than the fourth; the tarsi are filiform, and the ungues entirely smooth.

The antennæ are usually filiform, but sometimes setaceous. The form of body is variable, usually somewhat slender, with the elytra nearly twice as wide as the head or thorax, and oval or oblong, sometimes elliptical; the elytra are either rounded, truncate or emarginate at the base, usually slightly sinuate at the apex, and sometimes almost truncate, in which case a form of body results not unlike Dromius or Metabletus. Occasionally the form of body is stouter, and the elytra are hardly one half wider than the thorax; and in some western species, unknown to me, the form is said to be almost similar to Calathus; these latter species have been separated by Motschulsky as Tanystoma, (afterwards changed to Tanystola); the only characters given are, that the last joint of the palpi is longer than the preceding, and the posterior angles of the thorax obtuse. Scaphiodàctylus (Chaudoir) is also said to have the palpi as in Tanystola, but the posterior angles of the thorax are acute. Not having identified these genera, I can with propriety say nothing in regard to them.

The thorax is very variable in form, being sometimes oval, sometimes cordate, square, or rounded; the margin is sometimes strongly reflexed, sometimes hardly visible. The interval between the second and third striæ of the elytra is always marked with punctures, or fovæ, varying in number from three to seven; some species, not known to me by personal observation, are described as having but two punctures.

To facilitate the determination of our species, the following division into groups may be found useful.

A. Corpus apterum gracile; thorax fortiter marginatus, ovalis; elytra humeris rotundatis indistinctis. Sp. 1—4.

B. Corpus alatum gracile; thorax margine mediocri, elytra basi truncata, angulis posticis distinctis, tripunctata.

a. Angulis posticis thoracis non prominulis; antennæ subsetaceæ; elytra tenuiter striata. Sp. 5—7.

b. Angulis posticis thoracis prominulis; antennæ filiformes; elytra tenuiter striata. Sp. 8—9.

c. Nigerrimi; elytra profunde striata. Sp. 10—11.

C. Corpus alatum, gracile; thorax subcordatus, tenuiter marginatus, angulis posticis distinctis, impressionibus basalibus præcipue profundis productis.

d. Elytra tripunctata, pedes concolores. Sp. 12—13.

e. Elytra multipunctata, pedes rufi, vel picei. Sp. 14—18.

D. Corpus alatum, præcipue minus gracile, thorax rotundatus, (raro quadratus;) elytra tripunctata.

f. Præcipue nigri (raro picei vel metallici;) pedes concolores. Sp. 19—31.

g. Pedes testacei, vel rufi; thorax convexus tenuiter marginatus. Sp. 32—33.

E. Corpus alatum, gracile; thorax ovalis, vel leviter cordatus, tenuius marginatus; elytra tripunctata; pedes plus minusve testacei. Sp. 34—40.

F. Corpus alatum, gracile, præcipue elongatum; thorax ovalis; elytra multipunctata; pedes plus minusve testacei. Sp. 41—48.

G. Corpus alatum; thorax rotundatus, tenuissime marginatus; elytra foveata. Sp. 49.

H. Corpus alatum, minus gracile, thorax præcipue rotundatus (præcipue tenuiter marginatus) impressionibus basalibus latis, minus profundis; elytra multipunctata.

h. Corpus elongatum metallicum, pedes concolores. Sp. 50—51.

i. Corpus minus elongatum subgracile, pedes plus minusve testacei. Sp. 52—54.

k. Corpus robustius, angulis thoracis posticis fere distinctis. Sp. 55—56.

I. Corpus alatum, fere gracile, elytra oblonga, basi valde emarginata, apice fere truncata; elytra vel tripunctata, vel quadrifoveata. Sp. 57—61.

The cases of difficulty, in referring species by this table, will be but few; a species (P. quadratus) is placed in (f.,) which might, with almost equal propriety, be placed with (d.); still, the form is less slender, and the margin of the thorax much more obvious than in the latter group.

P. crenulatus in group (F.) differs from the others of the same group, by the broader and more quadrate elytra; still, its chief affinities appear to be with that group, and I have, therefore, not separated it from its allies.

A.

The species of this group are of a slender form and not winged; the legs and antennæ are long; the thorax is obovate, usually elongate; the posterior angles are obtuse and rounded at the apex; the lateral margin is strongly reflexed, and is broader than usual. The elytra are regularly elliptical, with no distinct humeral angles; they are sinuate towards the tip; the lateral margin is broader than in any other group, and is strongly reflexed. This group corresponds to Platynus of Bonelli and Dejean.

1. P. **fragilis**, piceus, thorace latitudine fere longiore obovato, fortius marginato, angulis posticis obtusis, subrotundatis, basi transversim profunde impresso, elytris ellipticis, thorace duplo latioribus, fortius marginatis, tenuiter striatis, 3-punctatis, antennis versus apicem subincrassatis. Long. ·34.

Found in the mountains near Santa Isabel, in the southern part of California. One specimen has four impressed punctures on the elytra. The antennæ, instead of being setaceous, as in the next two species, are slightly thickened beyond the fourth joint, as in most of the species of this genus.

2. P. **hypolithos**, niger nitidus, thorace latitudine fere longiore, obovato, fortiter marginato, angulis posticis obtusis rotundatis, basi transversim profunde impresso, utrinque longius sat profunde impresso, elytris thorace duplo latioribus ellipticis fortius marginatis, striis modice profundis, interstitiis convexis 2, 4 et 6to juxta striis biseriatim irregulariter punctatis, antennis setaceis palpis pedibusque ferrugineis. Long. ·55.

Feronia hypolithos Say, Trans. Am. Phil. Soc. 2, 59.

Platynus erythropus Dej. Sp. Gen. 3, 97.

Middle and Western States, in the vicinity of mountains. Besides the punctures mentioned, there are several on the sutural stria before the middle. Dejean's description is very full, but lest any entomologist should hesitate in referring this species to the description given by Say, which is certainly defective in some particulars, I transcribe it to save the labor of future reference.

"Apterous, black, glabrous: feet rufous; striæ of the elytra punctured. Length more than 11-20th of an inch.

"Antennæ dark piceous; palpi rufo-piceous. Thorax narrowed behind, dorsal line deeply impressed, surface obsoletely transversely wrinkled, basal lines dilated, distinctly indented, angles obtusely rounded, lateral edge regularly arquated. Elytra, striæ not deeply impressed, irregularly punctured. Thighs and coxæ rufous; tibiæ and tarsi dark rufous.

"This species seems to belong to the genus *Pterostichus* of Bonelli, and it may be distinguished from those which we have mentioned to be referable to that genus by the color of its feet."

3. P. angustatus, niger, nitidus, thorace latitudine fere longiore, obovato, fortius marginato, angulis posticis obtusis rotundatis, basi transversim impresso, utrinque longius sat profunde impresso, elytris thorace duplo latioribus, ellipticis fortius marginatis, striis profundis, interstitiis convexis, 3io quadripunctato, antennis setaceis, tibiis tarsisque piceis. Long. ·5—·55.

Dej. Sp. Gen. 3, 98.

Catskill Mountains, New York; Habersham Co., Georgia. This species is probably found in all mountainous portions of the United States east of the Mississippi.

4. P. stygicus, niger, nitidus, thorace latitudine paulo breviore, postice angustato, fortius marginato, angulis posticis obtusis rotundatis, basi transversim impresso, utrinque latius profunde impresso, elytris thorace vix duplo latioribus, basi subtruncatis striis profundis, interstitiis subconvexis, 3io tripunctato, antennis filiformibus. Long. .43.

One specimen, found at Sault Ste Marie. This species resembles in appearance P. sinuatus, &c., below, but from the absence of wings, and from the form of the thorax, I am induced to place it in the present division. The margin of the thorax is not as wide as in the other species, but is a little dilated towards the posterior angles; the basal impressions are deep, and are destitute of punctures or lines. The elytra are slightly convex, and their lateral margin is somewhat narrower than in the preceding species.

B—a.

Composed of winged species, of a piceous black color and slender form; the antennæ are long and setaceous; the thorax is strongly margined, a little wider than long, somewhat narrowed posteriorly, with the basal angles obtuse, neither prominent nor rounded; the posterior transverse impression is strong, and the basal impressions moderately long and deep. The elytra are more than twice as wide as the thorax, truncate at base, finely margined, sinuate towards the extremity; the humeral angles are rounded; the striæ are fine, and the third interstice has three punctures, the first being placed in the 3d stria, the other two in the 2d stria.

5. P. tenuicollis, piceo-niger, thorace latitudine fere longiore, capite non latiore, margine latiore piceo fortius reflexo, angulis posticis subrotundatis, elytris striis tenuibus profundis, tripunctatis, antennis palpis pedibusque piceis. Long. ·38.

Anchomenus tenuicollis Lec. Ann. Lyc. 4, 222.

One specimen, found at the Sault Ste Marie. Although very much resembling the next species in all its characters, the thorax is comparatively so much narrower, that I am obliged to consider it as distinct. The base of the thorax is more obliquely truncate each side, by which the basal angles are rendered more obtuse. By a clerical error the specific name is printed *angusticollis*, in Agassiz' Lake Superior.

6. P. marginatus, niger, nitidus, thorace latitudine paulo breviore, lateribus rotundatis, margine latiore piceo fortius reflexo, basi late rotundata, angulis posticis obtusis subrotundatis, elytris striis profundis, tripunctatis, antennis palpis tibiis tarsisque piceis. Long. ·42.

Lec. Agassiz' Lake Superior, 205.

Anchomenus marginatus Lec. Ann. Lyc. 221.

Middle and Western States; not rare. A specimen from the north shore of

Lake Superior agrees perfectly with this species, except that the legs are entirely of a dark testaceous yellow. From the next this species is distinguished by the lateral margin of the thorax being as wide anteriorly as towards the base, and more strongly reflexed.

7. P. cincticollis, niger, nitidus, thorace latitudine breviore, postice angustato, lateribus rotundatis, postice subsinuatis, margine piceo reflexo, postice latiore, elytris tenuiter striatis, tripunctatis, antennis pedibusque piceis, vel piceo-testaceis. Long. ·37—·45.

Feronia cincticollis Say, Trans. Am. Phil. Soc. 2, 52.
Anchomenus cincticollis Say, ibid 4, 421.
Platynus blandus Germ. Ins. Nov. 12.
Anchomenus corvinus Dej. Sp. Gen. 3, 102. Lec., Ann. Lyc. 4, 221.
Anchomenus deplanatus Chaud. Bull. Mosc. 1843, 763. Lec. Ann. Lyc. 4, 221.
Anchomenus marginalis Hald. Proc. Acad. Nat. Sc. 1, 299.

Middle and Southern States; common. The last two synonyms belong to a variety in which the interstices of the elytra, instead of being slightly convex as usual, are entirely flat; there are, however, no other differences of a definite character, and I see no reason why they should be retained as distinct. The brevity of Mr. Haldeman's description will make it doubtful whether this or the preceding species was meant, but a typical specimen kindly furnished me by him evidently belongs to the present species.

Dr. Harris possesses a specimen of this species, which was named Feronia maculifrons, by Mr. Say; with the description (Journ. Acad. Nat. Sc. vol. 3, p. 146) of that species it does not agree.

B—b.

Containing two winged species from California, closely allied to those of the preceding division, but of a somewhat less slender form, and with filiform antennæ. The thorax is strongly margined, slightly narrowed towards the base, with the posterior angles obtuse, not rounded, and slightly prominent; the posterior transverse impression is deep, and the basal impressions shallow; the elytra are twice as wide as the thorax, truncate at base, with the humeral angles rounded; they are finely margined and very slightly sinuate towards the tip; the striæ are fine, the interstices slightly convex, and the third has frequently four impressed punctures, which, however, seem liable to considerable variation; the normal number appears to be three.

8. P. bicolor, piceo-rufus, nitidus, thorace latitudine vix breviore, postice subangustato, lateribus rotundatis, postice sinuatis, margine fortius reflexo, basi truncata, angulis posticis rectis prominulis, elytris piceis, thorace duplo latioribus, striis tenuibus, interstitiis vix convexis, margine rufo-piceo. Long. ·43.

San Diego, California. The lateral margin of the thorax is moderately wide and not dilated posteriorly; the basal impressions are marked with a short impressed line at the bottom. Apart from color this species is distinguished from the next by the narrower thorax and more slender form.

9. P. cinctellus, niger, nitidus, thorace latitudine breviore, postice paulo angustato, lateribus rotundatis postice sinuatis, margine fortius reflexo, diaphano, basi truncata, angulis posticis prominulis rectis, elytris thorace fere duplo latioribus, striis tenuibus, interstitiis vix convexis, margine sæpe tenuiter piceo. Long. ·42.

San Francisco, California; very abundant. Specimens occur with three, four, and even five punctures on the third interstice of the elytra; the impressed lines of the basal impressions of the thorax are less distinct than in the preceding; the antennæ and palpi are nearly black; the tarsi are sometimes dark piceous.

I have distributed this insect under the name *Anch. brunneo-marginatus* (Mann. Bull. Mosc. 1843, 196,) but on reconsidering the matter, I find so many points of disagreement, that I am obliged to propose a new name. His description reads:

"Apterus, niger, depressus, capite lævissimo inter antennas impresso, thorace longiore, subcordato, lateribus reflexo-marginatis, angulis posticis acutiusculis, elytris oblongo-ovalibus, apice sinuatis, leviter striatis, punctis tribus minutis impressis, antennis pedibus, thoracis elytrorumque margine rufo-brunneis. Long. 4½ lin. lat. 1¾ lin."

With regard to the value of the first word of this diagnosis, I will merely observe that it occurs also in Count Mannerheim's diagnosis of *Anch. maculicollis* (l. c. 199,) which, however, I found at San Diego, in July, flying about in the evening twilight in such numbers as to be a source of great annoyance.

B—c.

The species of this group are moderately large, winged, and a pure shining black color; the thorax is slightly cordiform, with the posterior angles rectangular; the dorsal line and anterior transverse impression are deep; the basal impressions are large, moderately deep and finely punctulate; the lateral margin is moderate and is strongly reflexed, and slightly diaphanous in a strong light. The elytra are more than one half broader than the thorax, truncate at base, slightly sinuate at the extremity; they are somewhat flattened on the disc, and declivous towards the margin; the striæ are deep, and the third interstice has three impressed punctures.

I regret to be partly answerable for the confusion introduced among the species of this group, by mistaking those which have been already described, and incautiously admitting some which are not sufficiently distinct. Having carefully re-examined the subject, I hope that the results, here arrived at, may be found corrrct.

10. P. decens, niger, subnitidus, alatus, thorace postice subangustato, lateribus postice vix sinuatis, angulis posticis non prominulis, impressionibus basalibus dilatatis punctulatis, elytris magis deplanatis, tripunctatis, striis profundis obsolete punctulatis. Long. ·5—·56.

Lec. Agassiz' Lake Superior, 205.

Feronia decentis Say, Trans. Am. Phil. Soc. 2, 53.

Anchomenus gagates Dej. Sp. Gen. 3, 107.

Anchomenus decentis Say, Trans. Am. Phil. Soc. 4, 421.

Anchomenus coracinus Lec. Ann. Lyc. 4, 220. (Descriptio nequam.)

Middle and Southern States; not common. The description last cited was made from a badly preserved specimen, in which the wings had probably been pulled off to enable the elytra to be brought together; at least, on raising the elytra, I find fragments of the wings still remaining. The distinctive characters of the species are the larger size, the less distinct posterior angles of the thorax, (which are almost obtuse and very slightly rounded,) and the less lustrous and more flattened elytra. The fine punctures of the striæ are sometimes almost invisible. Dejean mentions four elytral punctures; the second one, however, is abnormal.

11. P. sinuatus, niger, nitidus, alatus, thorace latitudine subbreviore postice subangustato, lateribus postice vix sinuatis (basi apice sublatiore) angulis posticis vix prominulis, impressionibus basalibus dilatatis, punctulatis, elytris paulo convexis, bipunctatis, striis modice profundis, punctulatis. Long. .4—·5.

?*Anchomenus sinuatus* Dej. Sp. Gen. 3, 108. Lec. Ann. Lyc. 4, 220.

Middle States and Lake Superior. I am somewhat doubtful whether this is really Dejean's species. He says, in comparison, with the preceding, " le corselet est a peu près de la même forme; seulement les bords latéraux sont un peu moins largement déprimés." This difference, if it exists, is by no means obvious. The only satisfactory characters I can find are the smaller size, the more shining, less depressed and less deeply striate elytra.

a. Thorace postice magis angustato, lateribus postice subsinuatis, angulis posticis subprominulis.

Anchomenus depressus Hald. Proc. Acad. Nat. Sc. 1, 299. Lec. Ann. Lyc. 4, 221.

Platynus depressus Lec. Agassiz' Lake Superior.

Western States and Lake Superior. The difference in the form of the thorax is quite perceptible, yet, as there are forms almost intermediate, and no other character can be seen to separate it from the preceding, I think it expedient to arrange it as one of the *races* of P. sinuatus.

β. Thorace latitudine non breviore, postice angustato, et lateribus longius sinuato, angulis posticis paulo prominulis; impressionibus basalibus profundioribus.

Middle States and Lake Superior. Although the difference between this and P. sinuatus seems very considerable, in a large series of the form (α) they seem to disappear; I have therefore hesitated to propose a new name for this, and consider it, like the previous one, as a race under P. sinuatus.

C—d.

A group containing winged species, evidently allied to P. extensicollis &c., but differing by having only three elytral punctures; the feet and antennæ are entirely black. The thorax is flattened, moderately margined, the margin growing broader towards the base; it is almost longer than wide, very slightly narrowed posteriorly, hardly sinuate on the sides, truncate at base, with the posterior angles rectangular, not rounded; the basal impressions are very long and finely rugous; the elytra are flattened, truncate at base, slightly sinuate at apex; the striæ are deep and fine, the interstices flattish, the 3d with three impressed punctures; the antennæ are filiform.

12. P. funebris, cyanescenti-niger, thorace latitudine non breviore, postice subangustato, et lateribus subsinuato, angulis posticis rectis, basi utrinque longius impresso, et confertim ruguloso, elytris opacis thorace duplo latioribus parum convexis, striis subtilibus interstitiis planis, 3io tripunctato. Long. .4.

San Diego, California; abundant in almost dry water courses. Very distinct from all other species found within our territories.

13. P. æneolus, subtus nigro-virescens, capite thoraceque obscure viridiæneis, hoc latitudine non breviore, postice subangustato, lateribus late rotundatis, angulis posticis rectis, basi utrinque longius impresso, et confertim ruguloso, elytris planiusculis purpureo-nigris, nitidis, tripunctatis, striis tenuibus, profundis, interstitiis vix convexis. Long. ·4.

One specimen; Oregon. Also sufficiently distinct from all our other species.

C—e.

A group of extreme complexity, containing winged species of metallic colors, bluish or greenish, with the base of the antennæ, the feet, and occasionally the thorax rufous or pale piceous. The antennæ are long and filiform; the thorax is occasionally a little longer than wide, never much narrowed posteriorly, the margin fine, but strongly reflexed, moderately rounded on the sides; the base is oblique each side, and the posterior angles are obtuse and sometimes moderately rounded; the basal impressions are long, and posteriorly are marked with a short line. The elytra are elongate, about twice as wide as the thorax, scarcely sinuate posteriorly, striæ deep, but usually fine, the interstices hardly convex, the third with four to seven punctures, varying in the same species. By arranging the different forms as races under the more distinct species, this group appears to be capable of being reduced to order.

14. P. extensicollis, supra æneo-viridis, nitidus thorace latitudine longiore, postice paulo angustato, angulis posticis vix rotundatis, basi punctulata, impressionibus basalibus tuberculo parum elevato intructis, elytris striis subtiliter obsolete punctulatis, interstitio 3io 4—7 punctato, antennarum basi pedibusque rufis. Long. ·34—·39.

Lec. Agassiz' Lake Superior, 205.
Feronia extensicollis Say, Trans. Am. Phil. Soc. 2, 54.
Feronia (Anchomenus) proximus Harris, New England Farmer, 1828, p. 132.
Anchomenus extensicollis Dej. Sp. Gen. 3, 113.
Agonum (Anchomenus) extensicollis Kirby, Fauna Bor. Am. 24.

Middle, Southern, and Western States and Lake Superior ; Massachusetts. Dr. Harris; (lat. 54° according to Kirby.) This is usually considered as the type of Say's species, and is distinguished by the shining color, by the thorax being more distinctly narrowed posteriorly, with less rounded angles, and by the tubercle between the basal impression and the angle being distinct. The punctures of the base are fine, occasionally extending along the whole base, but sometimes visible only in the impressions. The color of the elytra sometimes varies towards bluish and coppery. The under surface is black.

α. Æneus, nitidus, thorace latitudine paulo breviore, postice angustato angulis posticis rotundatis, impressionibus basalibus tuberculo indistincto instructis. Long. ·39.

Anchomenus obscuratus Chaud. Bull. Mosc. 1843, 763.

'*Anchomenus elongatulus* Dej.' Lec. Ann. Lyc. 4, 222.

Middle States and Lake Superior.

β. Læte viridi-æneus, nitidus, thorace latitudine non breviore, postice subangustato, basi late rotundata, angulis posticis rotundatis, impressionibus basalibus tuberculo distincto instructis. Long. ·39.

One specimen from Lake Superior, which differs from the type by the thorax being much less narrowed posteriorly, with the posteriorly angles more rounded.

γ. Viridi-æneus, subnitidus, thorace latitudine longiore, postice subangustato, angulis posticis subrotundatis, impressionibus basalibus tuberculo nullo. Long. ·35—·39.

Anchomenus viridis Lec. Ann. Lyc. 4, 222.

Western States; a specimen was sent me by Dr. Harris, as Anch. extensicollis *Say*.

δ. Cyaneus, subnitidus, thorace latitudine longiore, postice vix angustato, angulis posticis subrotundatis, impressionibus basalibus tuberculo nullo, elytris striis profundioribus, haud punctulatis. Long. ·34.

Northern Sonora, near the Gila River. Resembles (γ) except in color; the striæ of the elytra are, however, deeper and not at all punctulate.

ε. Capite thoraceque æneo-viridibus, hoc latitudine vix longiore, postice subangustato, angulis posticis fere rotundatis, impressionibus basalibus tuberculo distincto instructis, elytris cyaneis, striis profundioribus obsolete punctulatis. Long. ·35.

One specimen found with the preceding.

15. P. simplex, supra æneo-viridis, subnitidus, thorace latitudine non breviore, postice subangustato, angulis posticis obtusis subrotundatis, basi lævi, utrinque longius impresso, elytris striis tenuibus impunctatis interstitiis vix convexis 3io 5—8 punctato, antennarum basi pedibusque piceo-testaceis. Long. ·3—·37.

Colorado River, California. Has very much the form of (δ) of the preceding species, but the thorax is absolutely free from punctures; in some specimens the thorax is more distinctly narrowed at the base, but the difference is not well marked: the base of the thorax is occasionally piceous, as in the dark colored specimens of the next species, from which it is distinguished by the interstices of the elytra being smooth. The under surface is black, the epipleuræ tinged with piceous.

16. P. decorus, capite viridi-æneo, thorace sæpius rufo (nonnunquam piceo-virescente) latitudine vix breviore, basi paulo angustato, angulis posticis obtusis subrotundatis, basi fere lævi, utrinque longius impresso, elytris striis tenuibus, interstitiis fere planis sat distincte punctulatis brevissime vix distincte pilosis, 3io punctis 5—7 impressis, antennis basi pedibusque rufis. Long. ·31—34.

Lec. Agassiz' Lake Superior, 205.

Feronia decora Say, Trans. Am. Phil. Soc. 2, 53.

Anchomenus decorus Dej. Sp. Gen. 3, 115. Lec. Ann. Lyc. 4, 223.

Anchomenus obscurus Lec. Ann. Lyc. 4, 223. (Var. pedibus fere piceis, thoraceque viridi.)

Abundant in the Middle, Southern and Western States; the dark colored varieties and all the intermediate forms are found on the shores of Onondaga Lake, near Syracuse, New York. I think that Anch. thoracicus *Dej.* must belong to this species, but as the fine punctures of the elytra are not mentioned in his description, it will be safer to consider it as distinct; in some specimens of (α) they might, however, readily be overlooked.

α. Capite viridi vel cyaneo, thorace rufo, elytris viridi-nigris, interstitiis parce fere obsolete punctulatis. Long. ·31—·34.

Middle and Southern States; also found near the Pima villages on the Gila. This differs from the type in having the punctures of the interstices of the elytra very faint; they are, however, furnished with short hairs. The specimens from the Gila differ in having the thorax a little less narrowed posteriorly, and tinged with greenish.

17. P. anchomenoides, nigro-piceus, capite virescente, thorace subquadrato latitudine vix breviore, margine tenui non reflexo, postice subangustato, angulis posticis obtusis subrotundatis basi utrinque minus profunde impresso, disco virescente, lateribus late parteque inflexa testaceis, elytris thorace duplo latioribus oblongis, convexiusculis, testaceis, interstitio 3io punctis 4 maiusculis impressis, antennarum articulis tribus, palpis, ano, pedibusque flavo testaceis. Long. ·28.

Lec. Agassiz' Lake Superior, 205.

Agonum anchomenoides Randall, Bost. Journ. Nat. Hist. 2, 2.

Pennsylvania, Lake Superior and Maine; rare. The disc of the elytra is darker than the margin; in the specimen from Pennsylvania the striæ are deep and the intervals somewhat convex; the one from Lake Superior has very fine striæ and the intervals are entirely flat. Is not *Agonum sordens* Kirby, (Fauna Bor. Am. 25,) a closely allied species or, perhaps, a variety having smaller punctures.

18. P. californicus, niger, piceo-æneseens, thorace subquadrato, latitudine vix breviore, postice subangustato, margine tenuiter reflexo, angulis posticis obtusis minime rotundatis, impressionibus basalibus elongatis, postice profundis, elytris thorace duplo latioribus, oblongis, basi truncatis, tenuiter striatis, 5-punctatis, antennarum articulo 1mo, thoracis parte inflexa, epipleuris pedibusque piceo-testaceis. Long. ·27—·32.

? *Anchomenus californicus* Dej. Sp. Gen. 3, 128. Mann. Bull. Mosc. 1843, 197.

San Francisco, San Jose and San Diego, California. I am doubtful about the propriety of referring this to Dejean's species, which is described as having the head and thorax obscure greenish-bronzed; slight traces of such color may be perceived in some of my specimens, but usually they are of a brownish black color, slightly tinted with bronze. In the uncertainty which hangs over many of the species, and under my great want of success in collecting (or perhaps in identifying) the species found in California, it would be hardly prudent to propose this as a new species. The reflexed margin of the thorax is distinct, but very narrow.

D—f.

Winged species mostly of a black color, with the legs and antennæ of the same color as the body; the thorax is rounded, with the posterior angles very obtuse, or altogether rounded; the margin is moderately broad, usually slightly dilated and reflexed towards the base; the basal impressions are broad and shallow; the elytra are not much wider than the thorax, truncate, or even subemarginate at the base, rounded and hardly perceptibly sinuate towards the extremity; the interstices are mostly flat, and the third has three punctures, the second of which, except when otherwise stated, is placed on or near the third stria. A numerous group, containing closely allied, yet quite distinct species.

19. P. collaris, niger, nitidus, thorace rotundato, paulo convexo latitudine vix breviore, angulis posticis rotundatis indistinctis, margine picescente latius reflexo postice latiore, impressionibus basalibus vix definitis, elytris thorace sesqui latioribus convexiusculis, striis tenuibus subtiliter crenulatis, interstitiis planis, 3io tripunctato, antennis basi fere piceis. Long. ·3—·35.

Anchomenus collaris Say, Trans. Am. Phil. Soc. 4, 421.

Louisiana; Dr. Schaum. A very distinct species, having the reflexed margin of the thorax broader than in any of the following; the basal impressions, although deep, are formed principally by the union of the reflexed margin with the moderately convex disc, and are consequently very indefinite. The punctures of the striæ of the elytra are very distinct.

20. P. mœrens, piceo-niger, nitidus, thorace subrotundato, latitudine paulo breviore, basi fere truncato, angulis posticis obtusis subrotundatis, margine reflexo postice latiusculo, impressionibus basalibus latis, tuberculo nullo, elytris thorace fere duplo latioribus, parum convexis, tenuiter striatis, tripunctatis. Long. ·34—·38.

Agonum mœrens Dej. Sp. Gen. 3, 152.

Louisiana, Dr. Schaum; Pennsylvania. This species differs from P. tenuis and others having fine elytral striæ, by the greater breadth of the reflexed margin of the thorax, (which, however, is narrower than in the preceding,) and by the greater distinctness of the posterior angles; the reflexed margin is sometimes tinged with piceous; the second elytral puncture is very near the second stria.

21. P. lævis, niger, nitidus, thorace rotundato, latitudine paulo breviore, basi late rotundata, angulis indistinctis, margine reflexo postice paulo latiore, impressionibus basalibus profundis, tuberculo obsoleto instructis, elytris convexiusculis, tripunctatis, striis profundis, vix punctulatis. Long. ·35—·38.

Middle and Western States. The thorax is more rounded than in P. melanarius; the tubercle of the basal impression less distinct, and the posterior angles hardly perceptible. From P. atratus it differs by the more strongly reflexed thoracic margin, the deeper basal impressions and the wider elytra.

22. P. melanarius, niger, nitidus, thorace subrotundato, latitudine breviore, basi fere truncata, angulis posticis obtusis rotundatis, margine reflexo postice paulo latiore, impressionibus basalibus latis, subrugosis, tuberculo distincto instructis, elytris thorace vix sesqui latioribus, basi subemarginatis, minus convexis, tripunctatis, striis profundis punctulatis, tibiis tarsisque obscure piceScentibus. Long. ·36—·4·

Lec. Agassiz' Lake Superior, 205.

Agonum melanarium Dej. Sp. Gen. 3, 152. Kirby, Fauna Bor. Am. 26.

Agonum maurum Hald. Proc. Acad. Nat. Sc. 1, 300.

Middle States, abundant; Vermont, Dr. Harris. The more reflexed thoracic margin the deeper basal impressions, and the distinct tubercle near the angle will readily separate this species from P. Harrisii. Dr. Harris thinks that this is not the species intended by Dejean. As, however, the latter says that the tibiæ, tarsi and basal joint of the antennæ are sometimes of a brownish color, I think that he cannot refer to any other of our species having three elytral punctures. A specimen having the thorax a little longer and less regularly rounded on the sides, was sent me, by Dr. Harris, under the name *Agonum nitidum*; I cannot, however, find sufficiently definite characters to separate it.

23. P. metallescens, supra nigro-æneus, subnitidus, thorace subrotundato, latitudine breviore, basi late rotundata, angulis posticis obtusis rotundatis, margine angustius reflexo postice vix latiore, impressionibus basalibus subrugosis, tuberculo distincto instructis, elytris thorace sesqui latioribus paulo convexis, basi subemarginatis, striis tenuibus profundis, subtiliter punctulatis, interstitiis paulo convexis, 3io tripunctato. Long. ·3—·35.

Sault Ste Marie, and northern shore of Lake Superior. Resembles in form and sculpture the preceding species, but, besides the color, readily distinguished by the narrower thoracic margin. The under surface, the antennæ and feet are black, slightly bronzed.

24. P. tenuis, supra æneo-niger, nitidus, thorace latitudine breviore, subrotundato, basi late rotundata, angulis posticis obtusis rotundatis, margine angustius reflexo picescente postice sublatiore, impressionibus basalibus latis minus profundis, subrugosis, tuberculo indistincto instructis, elytris thorace fere sesqui latioribus, convexiusculis, tenuiter striatis, interstitiis planis, 3io tripunctato. Long. ·36.

Middle and Eastern States, rare. Sufficiently distinct from P. melanarius, by the slightly bronzed color, more obtuse and more rounded posterior thoracic angles, and less deep and impunctured elytral striæ. From P. metallescens, which it resembles in the form of the thorax, it is easily known by the smooth elytral striæ and more dull color. From P. mœrens, it is distinguished by the wider thorax with more rounded base and less distinct posterior angles.

Dr. Harris sent a specimen as Ag. collare *Say*; the impunctured striæ, however, prevent it from being referred to the species described by him under the same name in the Trans. Am. Phil. Soc. as above quoted.

25. P. **Harrisii**, niger, nitidus, thorace latitudine paulo breviore, subrotundato, basi late rotundata, angulis posticis obtusis, rotundatis, margine angustius depresso vix reflexo, impressionibus basalibus latis, subrugosis, minus profundis, tuberculo obsoleto instructis, elytris paulo inæqualibus, thorace sesqui latioribus, tripunctatis, striis impunctatis. Long. ·35—·4.

Agonum Harrisii Lec. Ann. Lyc. 4, 225.

Massachusetts and Lake Superior. The inequalities of the elytra are produced by irregular dilated shallow impressions along the course of the striæ: the most obvious of these is usually near the extremity of the fifth striæ: Dr. Harris regards this as specific, and therefore applied to the species the unpublished name *Ag. sulcatum*. The thorax is less transverse and less rounded than in the preceding species, and the sides are less distinctly reflexed towards the base. The second elytral puncture is on the second stria.

26. P. **piceus**, rufo-piceus, nitidus, antennis capite thoraceque supra obscuris, hoc quadrato-rotundato, latitudine paulo breviore, basi late rotundata, angulis posticis obtusis vix rotundatis, margine anguste depresso vix reflexo, impressionibus basalibus latis, minus profundis, elytris thorace vix sesqui latioribus tripunctatis, striis sat profundis. Long. ·28.

Agonum piceum Lec. Ann. Lyc. 4, 226.

Massachusetts, Dr. Harris. Although differing in size and color, so as to present no resemblance whatever to P. Harrisii, the form and structure is very much as in that species: the posterior angles of the thorax are more distinct, and the elytral striæ deeper: as in that species, the second elytral puncture is in the second stria.

27. P. **carbo**, niger, nitidus, thorace subrotundato, latitudine paulo breviore, basi vix late rotundata, angulis posticis obtusis rotundatis, margine angustissime reflexo, impressionibus basalibus minus dilatatis, sat profundis, elytris thorace vix sesqui latioribus convexiusculis, tenuiter striatis, tripunctatis. Long. ·35.

Lec. Agassiz' Lake Superior, 205.

One specimen, from the northern shore of Lake Superior. Differs from all the preceding species by the narrower and slightly thickened reflexed margin of the thorax. It approaches otherwise perhaps most nearly to P. tenuis: the second elytral puncture is very near the second stria, but not in it, as in the two preceding species.

28. P. **atratus**, niger, nitidus, thorace fere rotundato, latitudine paulo breviore, basi rotundata, angulis posticis rotundatis, indistinctis, margine reflexo postice paulo latiore, impressionibus basalibus latis tuberculo obsoleto instructis, elytris thorace paulo latioribus, convexiusculis, tripunctatis, striis sat profundis. Long. ·34.

Lec. Agassiz' Lake Superior, 205.

Northern shore of Lake Superior. The thorax perhaps most nearly resembles that of P. melanarius, but the base is more rounded, and the basal angles hardly to be determined: the elytra are but little wider than the thorax, and more convex, giving the insect very much the form of Pterostichus erythropus. In one specimen the striæ of the elytra are impunctured, in another they are obsoletely punctulate.

29. P. **frater**, niger, nitidus, thorace transverso, subquadrato, basi vix late

rotundato, angulis posticis obtusis rotundatis, lateribus late rotundatis, margine anguste reflexo, basi utrinque late impressa, tuberculo indistincto instructo, elytris thorace sesqui latioribus, paulo convexis, tripunctatis, striis profundis, interstitiis paulo convexis. Long. ·35.

San Francisco and San Diego, California, not rare. I was inclined to refer this species to Agonum brevicolle *Dej.*, (Sp. Gen. 3, 159) but on examining several specimens, I find that the elytral punctures are always three: the second is placed about the middle on the third stria, as in most of the species above described: the lateral margin of the thorax is hardly wider towards the posterior angles than at the middle: the basal impressions are sometimes slightly rugous and punctulate. The form of the thorax is somewhat that of P. Harrisii, but is less rounded on the sides.

30. P. quadratus, æneo-niger, nitidus, thorace latitudine paulo breviore, quadrato, postice subangustato, basi media truncata, margine reflexo postice paulo latiore, angulis posticis vix rotundatis, impressionibus basalibus profundis, subtiliter rugosis, elytris thorace duplo latioribus minus convexis subquadratis, tripunctatis, striis sat profundis, interstitiis fere planis. Long. .34.

One specimen, Oregon. Enough remains of the antennæ and feet, to show that they were black. This species has a comparatively smaller thorax than the others of this group, and seems to establish a passage towards group (C—d,) from which, however, it differs in having the basal impressions of the thorax more excavated, and not prolonged anteriorly. The sides of the thorax are moderately rounded anteriorly: the second elytral puncture is placed on the second stria.

31. P. cupripennis, subtus æneo-niger, capite thoraceque viridi-aureis, nitidis, hoc latitudine breviore rotundato, margine tenui postice paulo latiore, basi utrinque modice impressa, subtiliter rugosa, elytris thorace sesqui latioribus, oblongo-ovalibus, fulgenti-cupreis, viridi late marginatis, subtiliter tripunctatis, striis tenuibus, interstitiis planis. Long. ·32—·36.

Lec. Agassiz' Lake Superior, 205.

Feronia cupripennis Say, Trans. Am. Phil. Soc. 2, 50.

Agonum cupripenne Dej. Sp. Gen. 3, 139. Kirby, Fauna Bor. Am. 28.

Abundant throughout the Middle and Western States; found also at Lake Superior, and, according to Kirby, in lat. 54°. A variety from Lake Superior has the thorax and head and margin of the elytra greenish blue, and the disc of the latter golden.

A specimen from New York, given me by Mr. Guex, has the upper surface green, somewhat darker, and tinged with purple on the head and thorax.

D—g.

A group containing winged species, in which the thorax is almost circular, and finely margined, with the basal impressions deep, but very small like punctures. The elytra are oval, truncate at base, slightly sinuate at tip, and moderately convex; the striæ are deep and punctured, the third interval has three impressed punctures: the antennæ at least in part are rufous.

32. P. punctiformis, niger, nitidus, thorace rotundato, tenuiter marginato, basi utrinque puncto maiusculo impresso, elytris thorace fere duplo latioribus, convexis tripunctatis striis antice punctulatis, antennarum basi tibiis tarsisque rufis, femoribus sæpe nigro-piceis. Long. ·28—·36.

Lec. Agassiz' Lake Superior, 206.

Feronia punctiformis Say, Trans. Am. Phil. Soc. 2, 58.

Agonum rufipes Dej. Sp. Gen. 3, 173.

Agonum punctiforme Say, Trans. Am. Phil. Soc. 4, 423.

Agonum foveicolle Chaudoir, Bull. Mosc. 1843, 764.

Lake Superior, Pennsylvania, Georgia, Nebraska. Between the specimens having the legs entirely red, and those having the thighs almost black, I can perceive no difference of a specific nature. Mr. Chaudoir compares it with *Ag. lenum* (Dej.,) but his description applies to no other but this species.

33. P. limbatus, nitidus, capite thoraceque saturate piceo-rufis, hoc rotundato, tenuiter marginato, basi utrinque puncto magno impresso, elytris thorace haud sesqui latioribus nigris margine lato testaceo, tripunctatis, striis fortius punctatis, postpectore abdomineque nigris, antennis piceis basi, palpis pedibusque testaceis. Long. •35.

Feronia limbata Say, Trans. Am. Phil Soc. 2, 47.

Agonum palliatum Dej. Sp. Gen. 3, 174.

Georgia, Illinois and Pennsylvania. A more robust species than the preceding, with a larger thorax.

E.

A group containing winged species of a metallic or submetallic color, with the base of the antennæ, the palpi and the legs, or at least the tibiæ and tarsi yellow. The thorax is slightly cordiform, narrowly margined, with the posterior angles obtuse and slightly rounded; the basal impressions are deep, moderately large and punctulate; the elytra are twice as wide as the thorax, truncate at base, moderately convex; the striæ are punctured; the third interstice has three punctures, of which the second is on or near the second stria.

34. P. æruginosus, piceo-æneus, nitidus, thorace latitudine subbreviore, ovali, convexo, tenuiter marginato, angulis posticis rotundatis, impressionibus basalibus parvis minus impressis, elytris thorace duplo latioribus, ovalibus, convexis, tenuiter striatis, interstitiis planis, 3io tripunctato, antennarum basi pedibusque piceo-testaceis. Long. •23—•28.

Agonum æruginosum Dej. Sp. Gen. 3, 168.

Vermont, Pennsylvania, Illinois, Georgia. By the small size of the basal impression of the thorax, this is readily distinguished from the other species of this group. Sometimes the antennæ appear entirely brownish black, but usually the first joint, at least, is reddish.

35. P. excavatus, æneus, nitidus, thorace latitudine non breviore, parum convexo, postice subangustato, basi punctulato utrinque profunde impresso, angulis posticis obtusis rotundatis, elytris thorace duplo latioribus tenuiter striatis, striis versus basin subtiliter punctulatis, interstitio 3io trifoveato, antennis basi pedibusque piceo-testaceis. Long. •28.

Agonum excavatum Dej. Sp. Gen. 3, 169.

Middle and Western States; not rare on the banks of streams.

36. P. ferreus, nigro-æneus, nitidus, thorace latitudine fere longiore convexo, postice paulo angustato, basi punctulato utrinque profunde impresso, angulis posticis obtusis, subrotundatis, elytris convexiusculis, tripunctatis, striis profundis usque ad medium valde punctatis, versus apicem minus impressis antennarum basi tibiis tarsisque piceo-testaceis. Long. •3.

Agonum ferreum Hald. Proc. Acad. Nat. Sc. 1, 299. Lec. Ann. Lyc. 4, 228.

Agonum ocreatum Hald. Proc. Acad. Nat. Sc. 1, 299. (Spec. immat.)

Middle and Western States; not common. The striæ of the elytra are quite faint towards the tip, which is obliquely subsinuate.

37. P. errans, obscure cyaneo-æneus, nitidus, thorace latitudine paulo breviore, paulo convexo, postice magis angustato, basi vix punctulato, utrinque profunde impresso, angulis posticis obtusis rotundatis, elytris thorace duplo latioribus paulo convexis, tripunctatis, striis angustis impunctatis, antennis fuscis, articulis 3 pedibusque rufis. Long. •29.

Feronia errans Say, Journ Acad. Nat. Sc. 3, 147.

Agonum errans Say, Trans. Am. Phil. Soc. 4, 423.

One specimen found on Platte River, Nebraska. Very similar to the next, but the thorax is longer and more distinctly narrowed posteriorly; the striæ of the elytra are absolutely without punctures, and the base of the antennæ is much paler.

38. P. subcordatus, cupreo-æneus (raro viridi-æneus) nitidus, thorace

minus convexo, latitudine breviore, postice subangustato, basi punctulato, utrinque latius profunde impresso, angulis posticis obtusis subrotundatis, elytris thorace fere duplo latioribus minus convexis, tripunctatis striis angustis versus basin subtiliter punctulatis, antennis nigro-piceis, articulo 1mo pedibusque piceo-rufis. Long. ·3—·34.

Lec. Agassiz' Lake Superior, 205.

?Agonum erythropum‖ Kirby, Fauna Bor. Am. 28.

Sandy Lake, Upper Mississippi; the green variety was found in Nebraska, near the Rocky Mountains. By the change of genus Kirby's name becomes a homonym of P. erythropus Dej. above described. As Mr. Kirby does not mention the punctures of the base of the thorax, nor of the striæ of the elytra, I am not certain that his species is the same as the one described; should it prove to be different from mine, the name P. Kirbyi must be applied to it.

39. P. basalis, æneus, nitidus, thorace latitudine non breviore ovali convexiusculo, postice subangustato, angulis posticis rotundatis, impressionibus basalibus profundis parce punctulatis, tuberculo obsoleto instructis, elytris thorace duplo latioribus oblongis, minus convexis, striis modice profundis, interstitiis paulo convexis, 3io subtiliter tripunctato, antennis piceis, articulo 1mo pedibusque rufis. Long. ·3.

Agonum basale Lec. Ann. Lyc. 4, 227.

One specimen found in Nebraska, near the mountains. From its color and form this species, at first sight, resembles a small specimen of P. extensicollis, but on comparison it is found completely different. The basal impressions of the thorax are not prolonged anteriorly, and the margin is not wider at the rounded posterior angles. The third interstice of the elytra has only three very small punctures, of which the second and third are placed on the second stria.

40. P. vagans, virescente-æneus, nitidus, thorace latitudine non breviore, ovali, postice subangustato, margine postice paulo latiore, angulis posticis rotundatis, impressionibus basalibus profundis, parce punctulatis, elytris thorace duplo latioribus, oblongo-ovalibus, parum convexis, striis sat profundis obsolete punctulatis, interstitiis vix convexis, 3io subtiliter tripunctato, antennis piceis, articulo 1mo pedibusque rufis, genubus, tarsisque paulo infuscatis. Long. ·29.

One specimen, New York. Resembles in form P. nutans, but the elytra have only three small punctures (the second near the second stria on one elytron, and near the third on the other;) the striæ are deeper and very finely punctulate; from P. subcordatus, it differs by the longer thorax.

F.

Winged species of a slender form, usually black, sometimes, hower, piceous, and in one instance of a metallic green color; the base of the antennæ and the feet are yellow; the thorax is oval, with the margin narrowly reflexed becoming broader towards the posterior angles, which are rounded and indistinct; the basal impressions are narrow, sometimes deep and smooth, sometimes nearly obsolete. The elytra are elongate oval, twice as wide as the thorax, moderately convex, emarginate at the base and obliquely subtruncate at tip; the striæ are fine, the interstices flat, the third marked with five or six punctures.

41. P. nutans, capite thoraceque viridiæneis, hoc ovali, latitudine longiore, margine angusto reflexo postice latiore, angulis posticis nullis, impressionibus basalibus profundis lævibus, elytris thorace duplo latioribus, elongatis, æneis nitidis, 5-punctatis, striis tenuibus impunctatis, antennis nigris articulo 1mo pedibusque piceo-rufis, femoribus apice infuscatis. Long. ·27—·35.

Feronia nutans Say, Trans. Am. Phil. Soc. 2, 52.

Agonum nutans Say, ibid. 4, 423, (syn. excl.); Lec. Ann. Lyc. 4, 227.

Agonum femoratum Dej. Sp. Gen. 3, 146.

Middle and Western States; also in Nebraska. Say, in the fourth volume above cited, makes the unaccountable error of referring Agonum striatopunctatum *Dej.* to this species.

42. P. **crenulatus**, nigro-æneus, minus convexus, thorace subrotundato, latitudine paulo breviore, margine reflexo postice paulo latiore, angulis posticis nullis, basi utrinque profundius impresso, et parce punctulato, elytris thorace duplo latioribus oblongis, 5 vel 6-punctatis, striis tenuibus antice punctulatis, interstitiis planis, antennarum basi pedibusque piceo-testaceis, vel testaceis. Long. ·31.

Georgia, rare; Louisiana, Dr. Schaum. This species establishes, by its form and characters, a passage from this group towards P. excavatus among those having three elytral punctures. The elytra are broader and more square in their outline than in any other species of this group, to which, nevertheless, it seems most closely related; in one specimen three joints of the antennæ are pale, in the other only the first one is dark testaceous.

43. P. **striatopunctatus**, æneo-niger, elongatus nitidus, thorace ovali latitudine longiore, margine reflexo postice latiore, angulis posticis nullis, basi utrinque profunde impresso, et obsolete punctulato, elytris thorace duplo latioribus, elongato ovalibus, striis punctulatis sat profundis, interstitiis paulo convexis, antennarum articulo 1mo pedibusque testaceis. Long. ·24—·3.

Agonum striatopunctatum Dej. Sp. Gen. 3, 167.

Agonum decipiens Lec. Ann. Lyc. 4, 229.

Georgia. Has very much the form of P. nutans, but is smaller and darker colored; the striæ of the elytra are deeper and distinctly but finely punctured.

44. P. **retractus**, niger, nitidus, thorace rotundato-ovali, latitudine non breviore, postice modice angustato, angulis posticis valde rotundatis, margine tenui postice latiore subreflexo, basi utrinque longitudinaliter sat profunde impressa, elytris ovalibus, picescentibus thorace plus sesqui latioribus, striis modice profundis, interstitiis subconvexis, 3io punctis 4 vel 5-impresso, pedibus rufis, antennis piceis basi rufo-testaceis. Long. ·27—·3.

Lec. Agassiz' Lake Superior, 205.

Agonum retractum Lec. Ann. Lyc. 4, 228.

?*Agonum lenum* Dej. Sp. Gen. 3, 166.

Lake Superior, Massachusetts and New York. The first specimen described by me was defective in having very small elytral punctures, whereby I was led into the error of describing the elytra as having only three punctures on the third interstice. The thorax is larger and wider in proportion than the last species, but the elytra are wider and less elliptical than in the remaining species of this group, and the striæ are deeper. I am somewhat doubtful about referring Dejean's description to this species, since not only the first joint of the antennæ, but very frequently three or four joints are paler than the outer joints, and the striæ of the elytra, in comparison with the following species, could hardly be called fine. As, however, Dejean implies that the sides of the thorax are somewhat reflexed posteriorly, I must acknowledge that my reference of his species to what is described below as P. picipennis, must be considered faulty.

45. P. **ruficornis**, piceo-niger nitidus, elongatus, thorace latitudine paulo longiore, ovali, postice paulo angustato, angulis posticis rotundatis, margine tenuiter reflexo postice paulo latiore, impressionibus basalibus latis minus profundis, elytris elongato-ellipticis, thorace vix sesqui latioribus, piceis striis tenuibus, interstitiis planissimis, 3io punctatis 5—7 impresso, pedibus rufis, antennis piceis extrorsum pallide rufis. Long. ·31.

Lec. Agassiz' Lake Superior, 205.

?*Agonum picipenne* var. C and D. Kirby, Fauna Bor. Am. 25.

Lake Superior. Larger than the preceding and following species, and besides the difference in the thorax, readily distinguished by the antennæ being much paler from the fourth joint outwards. I have cited Kirby, because he says that the varieties mentioned have the second, third and fourth joints of the antennæ piceous, and the rest ferruginous; in my specimens the first joint is rufous in one, and piceous in the others.

46. P. **picipennis**, niger nitidus, elongatus, thorace ovali, latitudine lon-

giore, tenuiter marginato, angulis posticis rotundatis, impressionibus basalibus angustis parum profundis, elytris thorace latioribus, elongato-ellipticis, piceis, striis tenuibus, interstitiis planis 3io punctis 4—6 impresso, epipleuris pedibusque piceo-testaceis, antennis nigro-piceis, articulo 1mo rufescente. Long. ·25—·27.

Agonum picipenne Kirby, Fauna Bor. Am. 25.

Agonum lenum‡ Lec. Ann. Lyc. 229.

Platynus lenis‡ Lec. Agassiz' Lake Superior 205.

Middle States, Nebraska and Lake Superior. The elytra are sometimes nearly black, and sometimes nearly testaceous; the lateral margin of the thorax is not dilated posteriorly. In the paler specimens the antennæ are piceous, with the first three or four joints testaceous.

47. P. lutulentus, piceo-testaceus, nitidus elongatus, capite nigro, thorace ovali, latitudine longiore, tenuissime marginato, angulis posticis rotundatis, impressionibus basalibus parvis minus impressis, elytris thorace latioribus, elongato-ellipticis, striis tenuibus interstitiis planis, 3io punctis 4 maiusculis impresso, antennis piceis, articulo 1mo rufo. Long. ·26.

Maine and Lake Superior. Apart from the difference in color, this species differs from the preceding in having the thorax still more finely margined, with the basal impressions smaller and less marked; the striæ of the elytra are finer, and the punctures appear to be larger and never more than four in number. I formerly distributed this species as Agonum sordens *Kirby*, (Fauna Bor. Am. 25,) but on reviewing the subject I find that it does not correspond with his description. The color beneath is about the same as above, and varies from pale piceous to deep piceous.

48. P. nigriceps, pallide testaceus, nitidus, elongatus, capite nigro, thorace elongato, subquadrato, latitudine longiore, lateribus paulo rotundatis, basi angulisque posticis rotundatis, tenuissime marginato, impressionibus basalibus parvis, minus impressis, elytris thorace sesqui latioribus elongato-ellipticis, striis tenuibus, interstitiis planis 3io punctis 4 subtilibus impresso, sutura thoracisque disco longitudinaliter infuscatis, antennis piceis, basi testaceis. Long. ·25.

Lec. Agassiz' Lake Superior, 205.

Agonum nigriceps Lec. Ann. Lyc. 4, 229.

One specimen, Eagle Harbor, Lake Superior. The appearance is very much like that of Demetrias atricapillus of Europe; the elytra are somewhat more distinctly sinuate at the apex than in the other species of this group, and are, indeed, almost obliquely truncate; the sutural striæ is deeper than the others.

G.

A group containing but one winged species of a metallic green color, and moderately stout figure; the thorax is rounded, slightly truncate at base, very finely margined, with the basal impressions small and deep; the elytra are subelliptical, emarginate at base, slightly sinuate at tip, finely striate, with several large quadrate foveæ on the third interval.

49. P. octopunctatus, supra æneo-viridis, vix nitidus, thorace rotundato, tenuiter marginato, basi subtruncata, utrinque fovea profunda impressa, elytris thorace sesqui latioribus ellipticis, tenuiter striatis, foveis quatuor quadratis obscuris profundis utrinque impressis, antennarum basi pedibusque piceo-rufis, femoribus æneo-micantibus. Long. ·3.

Carabus octopunctatus Fabr. Ent. Syst. Suppl. 55. Syst. El. 1, 186.

Feronia octopunctata Say, Trans. Am. Phil. Soc. 2, 51.

Agonum octopunctatum Dej. Sp. Gen. 3, 136.

Middle and Western States. The elytra are frequently tinged with coppery from the suture as far as the fourth stria, and have occasionally five foveæ. The under surface is shining blackish green.

H—h.

A group containing two winged species, in which the thorax is rounded and moderately large, finely margined, with the margin extending along the sides of the base and very slightly thickened, but hardly reflexed. The elytra are not much wider than the thorax, emarginate at base, hardly sinuate at the apex, and have four and five punctures on the third interval. The antennæ and feet are entirely black; the upper surface is coppery.

50. P. **protractus**, elongatus supra æneus, nitidus, thorace rotundato, tenuiter marginato, basi truncata utrinque latius foveata et obsolete punctulata, angulis posticis valde rotundatis, elytris thorace paulo latioribus, 4-punctatis, interstitiis planis; subtus cum antennis pedibusque æneo-niger. Long. ·33.

Lake Superior, and Sandy Lake, Minnesota. The difference between this and the next species is not well defined; nevertheless, several specimens agree in having the thorax not wider than long, with the posterior angles more definite, although much rounded; the general form of the body is narrower. These differences are not sexual, as of each form are found both males and females.

51. P. **chalceus**, capite thoraceque supra æneis nitidis, hoc rotundato, tenuiter marginato, latitudine breviore, basi truncata, utrinque latius foveata et obsolete punctulata, angulis posticis obsoletis, elytris thorace fere sesqui latioribus, cuprascentibus, 4 vel 5-punctatis, interstitiis planis, subtus cum antennis pedibusque æneo-niger. Long. ·33—·35.

Lec. Agassiz' Lake Superior, 205.

Agonum chalceum Lec. Ann. Lyc. 4, 224.

Sault Ste Marie, Michigan, not rare; a specimen also occurred in Nebraska. Can *Agonum cupreum* Dej. (Sp. Gen. 5, 736,) be a variety of this or the preceding species, having but three elytral punctures?

H—i.

Winged species of moderately stout figure and variable color. The thorax is broad and rounded, with the posterior angles obsolete; the margin is fine and slightly reflexed, the basal impressions are large, rounded and shallow. The elytra are deeply emarginate at base, very slightly sinuate at the apex; the striæ are fine, and the intervals flat; the third interval has from 5 to 8 punctures.

52. P. **placidus**, cyaneo-niger, subnitidus, thorace rotundato, latitudine paulo breviore, margine fortius reflexo picescente postice paulo latiore, basi utrinque late sat profunde foveata, elytris thorace sesqui latioribus, tenuiter striatis, 5—7-punctatis, antennarum articulo 1mo tibiis tarsisque piceo-testaceis. Long. ·3—37.

Feronia placida Say, Trans. Am. Phil. Soc. 2, 43.

Agonum morosum Dej. Sp. Gen. 3, 145.

Lake Superior, Maine, Illinois, New York, Georgia, Santa Fe. Readily recognized by its greenish or bluish black color; the elytral punctures are usually six in number, of which the two posterior are situated in the second stria, the others on the third. Varieties occur having the legs of a uniform dull reddish color.

53. P. **maculicollis**, rufo-testaceus, subnitidus, capite obscuriore, thorace rotundato, latitudine breviore, margine tenui paulo reflexo, basi utrinque late vix distincte impressa obsolete punctulata, macula discoidali magna obscura ornato, elytris thorace sesqui latioribus, tenuiter striatis, 5—6-punctatis, nigris margine lata ad humeros dilatata antennis pedibusque testaceis, abdomine nigro-piceo ano testaceo. Long. ·40—·48.

Agonum maculicolle Dej. Sp. Gen. 3, 175.

Anchomenus maculicollis Mann. Bull. Mosc. 1843, 199.

California, in every part west of the Sierra; the elytra are distantly and very obsoletely punctulate; of the punctures the two anterior are placed in the third, the others in or near the second stria. The thorax is sometimes entirely testaceous. By a strange error Count Mannerheim has added the word "apterus" to the diagnosis, which he has otherwise copied almost literally from Dejean; the insect is always winged, and at San Diego, in June, occurred in such numbers, flying in the twilight, as to be very troublesome.

54. P. variolatus, æneo-niger, thorace latitudine breviore, rotundato, margine tenui reflexo, basi utrinque late minus profunde foveata, elytris thorace duplo latioribus, tenuiter striatis, punctis 5—7 maiusculis impressis, æneo-piceis, margine late pedibusque flavo-testaceis, antennis nigro-piceis, articulo 1mo rufo. Long. ·25.

Lec. Ann. Lyc. 5, 178.

San Francisco, California; under bark of dead trees. The four anterior of the elytral punctures are placed on the third, the posterior three, or two (as the case may be) are adjacent to the second stria. In one specimen there are only three punctures on the third stria, the other four being on the second. The basal impressions do not combine with the concavity near the margin (as in P. placidus) but remain distinct.

Mr. Motschulsky (Bull. Mosc. 1845, pars 1, 21,) has mentioned a species under the name *Agonum limbatum*, which may be identical with our insect. He merely states, "in size and form it resembles closely A. pelidnum, but is readily distinguished by the whitish margin of the elytra." The specific name is, however, preoccupied by Say.

H—k.

A group containing species of a robust form, but flattened body; the color is more or less metallic; the legs and antennæ dark colored or black; the thorax has the posterior angles somewhat distinct, but not prominent; the margin is very narrow, but not reflexed; the basal impressions are shallow and prolonged anteriorly. The elytra are scarcely one half wider than the thorax, emarginate at base, very slightly sinuate at the tip; the striæ are well marked, but fine; the third interval has from five to seven punctures.

55. P. deplanatus, æneus, virescens, modice elongatus, thorace rotundato-quadrato, tenuiter marginato, latitudine breviore, postice parum angustato, basi truncato, utrinque sat profunde impresso, angulis posticis obtusis, haud rotundatis, elytris fere depressis, thorace vix sesqui latioribus, oblongis, tenuiter striatis, 6-punctatis, antennarum articulo 1mo pedibusque piceo-æneis. Long. ·38—45.

Agonum deplanatum Ménétriés, Bull. Petrop. 2, 58. (1844.)

Abundant at San Jose. The original description mentions that the striæ of the elytra are finely punctulate; this character may be observed in some specimens, but is usually not apparent. The basal impressions of the thorax are sometimes very obsoletely punctulate; the punctures of the third interval of the elytra are not adjacent to either stria.

56. P. fossiger, niger, vel æneo-niger, thorace rotundato-quadrato, tenuiter marginato, postice subangustato, basi late rotundata, utrinque longius impressa, angulis posticis obtusis subrotundatis, elytris paulo convexis, (feminæ opaciusculis) thorace vix sesqui latioribus, oblongis, striis fere impunctatis, interstitiis parum convexis, 3io punctis 5—7 maiusculis impressis. Long. ·35—38.

Agonum fossiger Dej. Sp. Gen. 3, 160.

Anchomenus fossiger Mann. Bull. Mosc. 1843, 199.

California, at San Francisco, San Jose, San Diego, and the Colorado River. Varies not only in color, but even in form; the thorax is usually distinctly wider than long, and considerably rounded on the sides; the basal impressions are broad and obsoletely prolonged anteriorly to the middle, and occasionally slightly punctulate.

a. This is a single specimen from San Francisco, in which the thorax is not wider than long, almost square, and less rounded on the sides than in the other specimens, but with the posterior angles less distinct and more rounded. The general form of the body is narrower, but as I have not found the characters sufficiently distinct, it would be imprudent for the present to separate it under another name.

I.

A group of small black winged species, having the thorax transverse, rounded at the sides and base, with the posterior angles very obtuse, but usually distinct; the margin is narrowly reflexed, especially towards the posterior angles; the basal impressions are not obvious, being lost in the concavity between the margin and the disc; the elytra are oblong, and flattened; they are deeply emarginate at base; when the elytra have three small punctures, they are almost truncate at tip, and are slightly sinuate: when the elytra are deeply foveate, the sutural portion is more prolonged, so that the truncation becomes oblique. The striæ are very fine and badly defined; the legs and antennæ are black; the latter are a little stouter than usual, though hardly perceptibly so.

57. P. consimilis, niger, nitidus, thorace subquadrato transverso, basi et lateribus latius rotundato, angulis posticis distinctis, margine tenui reflexo postice paulo latiore, elytris oblongis, basi valde emarginatis, thorace duplo latioribus, tenuiter striatis, subtiliter tripunctatis. Long. ·32.

One specimen; Michipicoton, Lake Superior. Differs from P. obsoletus by its larger size, less rounded base of thorax, and much more distinct posterior angles. The four anterior trochanters are red. As in the next two species, the apex of the elytra is almost truncate, and as in them the second puncture is in the second stria.

58. P. obsoletus, niger, nitidus, thorace transverso, postice subangustato basi valde rotundato, angulis posticis obtussissimus, margine tenui reflexo postice paulo latiore, elytris oblongis, basi valde emarginatis, thorace duplo latioribus, tenuiter striatis, subtiliter tripunctatis. Long. ·24—·28.

Feronia obsoleta Say, Trans. Am. Phil. Soc. 2, 57.

Agonum luctuosum Dej. Sp. Gen. 3, 172.

Agonum obsoletum Say, Trans. Am. Phil. Soc. 4, 423.

'*Feronia placida* Say,'‡ Lec. Ann. Lyc. 4, 227; Agassiz' Lake Superior, 205.

New York and Lake Superior. The error by which I referred this species to Feronia placida Say, is entirely unaccountable. This common species frequently has the anterior and middle trochanters of a deep red color. I have received a typical specimen named by Say, through the kindness of Dr. Harris.

59. P. strigicollis, niger, nitidus, thorace transverso, postice vix angustato, basi rotundata, angulis posticis obtusis, margine tenui reflexo postice paulo latiore, impressionibus basalibus longiusculis minus distinctis subtiliter rugosis, elytris fere duplo latioribus oblongo-quadratis, subtiliter striatis, tripunctatis. Long. ·3.

Anchomenus strigicollis Mann. Bull. Mosc. 1852, 294.

Oregon, at Prairie Paso, and Fort Vancouver, Dr. J. G. Cooper; northern part of the west coast of America, according to Count Mannerheim. This species is very closely related to the preceding, but the thorax is wider posteriorly, thus becoming more quadrate, the posterior angles are more distinct, and the reflexed margin is a little wider. The elytra are comparatively much shorter, being not more than one half longer than wide, while in P. obsoletus they are fully twice as long as wide; the basal impressions of the thorax, though long, are very indistinct; in the preceding they cannot be traced.

60. P. bembidioides, æneo-niger, opacus, thorace transverso subquadrato, basi rotundata, postice subangustato, angulis posticis obtusis at distinctis, elytris oblongis, maculis sericeis confluentibus variegatis, tenuiter striatis, foveis quatuor magnis utrinque impressis. Long. ·26.

Lec. Agassiz' Lake Superior, 206.

Sericoda bembidioides Kirby, Fauna Bor. Am. 15, pl. 1, fig. 2.

Agonum bembidioides Lec. Ann. Lyc. 4, 227.

One specimen, Lake Superior. Closely resembles the next species, but is sufficiently distinct by its larger size, and the irregularly mottled appearance of the elytra.

Kirby's genus Sericoda was formed on an erroneous examination of the palpi of a distorted or mutilated specimen. Chaudoir (Bull. Mosc. 1844, p. 70) has established a genus Rhytiderus, upon Dromius 10-punctatus, from South America, but which, as observed by Erichson, (Bericht über —— Entom. 1844,) belongs to Kirby's Sericoda. The relation between the genus Sericoda, and a very common insect of northern Europe, does not, however, appear to have been suspected by any of the authors.

61. P. stigmosus, æneo-niger, subnitidus, thorace transverso subquadrato, basi rotundata, postice subangustato, angulis posticis obtusis at distinctis, elytris oblongis, tenuiter striatis, utrinque foveis magnis quatuor impressis. Long. ·21.

Platynus quadripunctatus[‡] Lec. Agassiz' Lake Superior, 206.

Very abundant at Lake Superior, and found also in Maine and New Hampshire. Dr. Schaum tells me that he considers this as the same as the European P. quadripunctatus, and in my catalogue of Lake Superior Coleoptera, I gave it as such on his authority. On comparing, however, a large number of specimens with one found in Sweden, the posterior angles of the thorax, although very obtuse, appear to be always well defined, while in the European specimen the angles and the base are rounded together, so that the apex of the angle cannot be defined.

Many of the specimens have two slightly impressed foveæ before the middle of the thorax, but some are found without such impressions.

OLISTHOPUS *Dej.*

1. O. parmatus, niger, nitidus, thorace rotundato, transverso, margine tenui testaceo, basi utrinque minus profunde impressa, elytris thorace latioribus breviter ovalibus, basi emarginatis, subtiliter tripunctatis, sat profunde striatis, piceo-testaceis, disco plus minus infuscato, antennis palpis pedibusque testaceis, illis extrorsum fuscis. Long. ·28.

Dej. Sp. Gen. 3, 181.

Feronia parmata Say, Trans. Am. Phil. Soc. 2, 49.

Olisthopus cinctus Say, Trans. Am. Phil Soc. 4, 424.

Pennsylvania, Indiana, Georgia. A type of O. cinctus, given me by Dr. Melsheimer, does not differ in any essential point from the other specimens. I have never seen any in which the lateral bead of the thorax was not testaceous, and am inclined to believe that Mr. Say had not a specimen of his *Feronia parmata* before him when he described O. cinctus. The basal impressions of the thorax are sometimes obsoletely punctulate, in other specimens they are quite smooth; the elytra are sometimes nearly uniform brownish yellow, sometimes piceous, with the shoulders and sides indistinctly brown.

2. O. micans, nigro-piceus, nitidus, cyaneo-micans, thorace rotundato, transverso, margine tenui testaceo postice subreflexo, basi utrinque vix late foveata, elytris ovalibus, basi emarginatis, tripunctatis, tenuiter striatis, margine tenui testaceo, antennis palpis pedibusque flavis, illis extrorsum fuscis. Long. ·18.

Leconte, Ann. Lyc. New York 4, 230.

Georgia and Louisiana. Readily distinguished by its small size; the striæ of the elytra are finer than in O. parmatus, and the intervals perfectly fat; the margin of the thorax is a little reflexed and broader towards the base.

SPECIES UNKNOWN TO ME.

From California.

Calathus Behrensii Mann. Bull. Mosc. 1843, 195.

Scaphiodactylus micans Chaud. Bull. Mosc. 1844, 479. *Anchomenus micans* Ménétriés, Bull. Petrop. 2, 58.

Tanystola striata Motsch. Käfer Russl. (Carab.) 69. *Anchomenus striatus* Dej. Sp. Gen. 3, 132. Mann. Bull. Mosc. 1843, 198.

Tanystola sulcata Motsch. Käfer Russl. (Carab.) 70. *Anchom. sulcatus* Dej. Sp. Gen. 3, 131. Mann. Bull. Mosc. 1843, 198.

Anchomenus ovipennis Mann. Bull. Mosc. 1843, 196. *A. rotundipennis* Motsch. Bull. Mosc. 1845, part 2, 340.

Anchomenus rugiceps Mann. Bull. Mosc. 1843, 196. *A. ovipennis* Motsch. l. cit. 2, 339.

Anchomenus maurus Motsch. Bull. Mosc. 1845, 2, 339.

Anchomenus brunneo-marginatus Mann. Bull. Mosc. 1843, 196.

Anchomenus ferruginosus Dej. Sp. Gen. 3, 128. Mann. Bull. Mosc. 1843, 197.

Agonum brevicolle Dej. Sp. Gen. 3, 159. *Anchom. brevicollis* Mann. Bull. Mosc. 1843, 199.

Agonum famelicum Ménétriés, Bull. Petrop. 2, 58.

From Russian America.

Agonum molle Esch. Mém. Soc. Imp. Mosc. 6, 102. Fischer, Ent. Ross. 2, 125, tab. 19, fig. 2. *Anchom. mollis* Dej. Sp. Gen. 3, 129. Mann. Bull. Mosc. 1843, 198.

Agonothorax planipennis Motsch. Käfer Russl. (Carab.) 68.

From Atlantic America.

Anchomenus elongatulus Dej. Sp. Gen. 3, 112.

Agonum nitidulum Dej. Sp. Gen. 3, 143.

Agonum cupreum Dej. Sp. Gen. 5, 735.

Agonum albicrus Dej. Sp. Gen. 3, 158.

Agonum sordens Kirby, Fauna Bor. Am. 25.

Agonum seminitidum Kirby, Fauna Bor. Am. 26.

Agonum simile Kirby, Fauna Bor. Am. 27.

Agonum affine Kirby, Fauna Bor. Am. 27,

Feronia maculifrons Say, Journ. Acad. Nat. Sc. 3, 146, (vide Platynus cincticollis, sup. p. 43.)

Feronia scutellaris Say, (Journ. Acad. Nat. Sc. 3, 146) is a diseased specimen of one of our black species, allied to P. melanarius.

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Anchomenus pubescens Dej. (Sp. Gen. 3, 122) of which Anch. obconicus Hald. (Proc. Acad. 1, 299) is a synonym, does not belong to this group, but forms a genus Atranus Lec. (Ann. Lyc. 4, 438,) allied to Chlænius.

The European Platynus angusticollis Dej. is mentioned by Kirby (Fauna Bor. Am. 23) as being found on this continent in lat. 54° and 65°; his description seems to apply to one of the species of division (B—a,) and probably to P. marginatus; a comparison of specimens is, however, desirable in order to establish the synonymy.

Descriptions of new genera and species of North American Frogs.

By Spencer F. Baird.

HYLADÆ.

Teeth in upper jaw. Abdomen granulated. Two outer metatarsals, firmly united throughout by muscle and ligament.

1. *Acris crepitans*, Baird.—Brownish above. The median region of head and body above bright green: a dark triangle between the eyes. Three oblique blotches on the sides, nearly equidistant; the first behind the eye, the last on the flanks and running up on the back; all usually margined with lighter. A narrow white line from the eye to the arm. Beneath yellowish white. Inferior face of thigh plain. Tibia a little more than half the length of the body; foot rather smaller. Head rather obtuse, scarcely longer than broad. Web of hind foot extending to the penultimate articulation of the 4th toe.

Syn. *Hylodes gryllus*, De Kay, N. Y. Zool. III. (1842.) 70, Pl. xxii. f. 61.

Hab. Northern States generally.

2. *Acris acheta*, Baird.—Slender. Tibia two-thirds the length of body. Color above dark brown; blotched much as in *Acris gryllus*. Beneath white, closely

mottled with brown on the body and on the inferior and inner faces of the limbs; where are also visible minute white dots. Lower surface of body appears quite black. A narrow white line from eye to arm.

Hab. Key West, Florida.

Genus CHOROPHILUS, Baird.

Smooth above, granulated beneath. Extremities of limbs simple, not dilated at tip. Hands free; feet with a slight basal web, which is entirely wanting between the two outer toes. Tongue orbicular; emarginate behind. Teeth posterior to the inner nares. Tympanum distinct. Transverse apophyses of sacral vertebræ dilated into triangular pallets.

Distinguished from *Acris* by expansion of apophyses; from *Litoria* by the emarginate tongue, less membrane of toes, and more posterior palatine teeth; from *Hylodes* in having a membrane at base of toes, &c.

Type, *Chorophilus nigritus*, Baird, (Cystignathus nigritus, Holb.)

Genus HELOCÆTES, Baird.

Granulated almost everywhere above and below. Tongue nearly entire. Vomerine teeth between the nares. Tympanum distinct. Fingers and toes slightly dilated or knobbed. Fingers free; toes webbed to bases of phalanges; a slight membrane at base of outer toes. Transverse apophyses of sacral vertebræ expanded at ends.

Differs from *Hylodes* and *Acris* in membrane of toes, and dilatation of sacral apophyses; from *Hyla* in slight web and disks; from *Chorophilus* in more anterior position of vomerine teeth, &c.

3. *Helocætes feriarum*, Baird.—Body stout, squat. Head broad. Femur and tibia and hind foot about equal, and half the length of the body. Above dark or fawn, with three nearly parallel stripes down the back, the central widening, but scarcely bifurcate behind, and commencing behind a triangular spot between the eyes. A similar dark vitta on sides of head and body, with a white line along edge of the jaw. Body about one inch long.

Hab. Carlisle, Penna.

4. *Helocætes triseriatus*, Baird.—Body rather slender; head narrow. Femur less than tibia, which is about two-thirds length of body, and shorter than hind foot. Light bluish ash above, with a dark dorsal stripe commencing at the snout, and not interrupted between the eyes; bifurcating about the middle of the trunk; a stripe on each side of this, and another on sides of head and body, making five distinct stripes anteriorly; lateral stripe with white line below. Body about an inch in length.

Syn. *Hyla triseriata*, Max. Prinz von Wied. Reise 1, (1839,) 249.

Hab. Michigan, Illinois, Wisconsin and the upper Missouri.

5. *Helocætes clarkii*, Baird.—Snout acute, projecting. Extremities somewhat dilated. Tibia half the distance between eye and anus. Foot but little longer, not nearly half the length of body. Above grayish brown or ash, with distinct large circular blotches. A dark band from snout through eye and tympanum down the sides, and a whitish line on the side of jaw. Size about one inch long.

Hab. Galveston and Indianola, Texas.

6. *Hyla richardii*, Baird.—Above uniform grass green; smooth; beneath white. Tibia considerably less than half the length of body. Hind foot less than arm from elbow. Less than one inch in length.

Hab. Cambridge, Mass.

7. *Hyla andersonii*, Baird.—Skin smooth but wrinkled; arm from elbow longer than hind foot. Above dull olive brown, as are all the exposed surfaces of the limbs when the animal is couchant; all the concealed surfaces, especially those in contact with each other, are thickly sprinkled with circular, yellowish white spots on a pale brown ground, seen also on the armpits and sides of body behind. A post-ocular dark vitta extended down the sides (where its lower

edge is indistinct) and sending a dark branch across the arm to the chin. No bars on the limbs. Body about two inches in length.

Hab. Anderson, South Carolina.

8. *Hyla eximia*, Baird.—Smooth above. Tibia not half the total length of body. Hind foot not longer than arm from elbow. Bluish above, with two dark longitudinal stripes; beneath white. A dark band from the eye along the sides, margined above and below by a white line, the latter reaching only to the arm, behind which the outline of the dark band is indistinct. Legs not banded. Body about an inch long.

Hab. City of Mexico.

9. *Hyla vanvlietii*, Baird.—Nearly smooth above. Tympanum nearly as large as the eye. Tibia half as long as the body, longer than arm from elbow, which in turn exceeds the foot. Ash gray or olive, with an irregular cruciform dorsal blotch. A black spot on the side above the foreleg. A white spot under the eye. Thigh and leg with three transverse bands each. Their inner surfaces (when flexed) scarcely reticulated, but spotted with white upon a darker ground. Inside of tibia uncolored. Body two inches long.

Hab. Brownsville, Texas.

10. *Hyla affinis*, Baird.—Body rough. Tympanum two-thirds the size of eye. Tibia not quite half the length of the body, but reaching more than half way from anus to centre of eyes. Color ash gray or green, with numerous rounded dorsal blotches. Three transverse bands on each thigh and leg. No vermiculation on anterior and posterior faces of hind legs, nor on lower part of sides. A light spot under the eye. Web of hand extending only to the third joint of the second finger. Arm from elbow less than tibia, but longer than hind foot. About 1½ inches long.

Hab. Northern Sonora.

RANIDÆ.

Teeth in upper jaw. Abdomen smooth. Two outer metatarsals free for most of length, or united only by membranes.

11. *Rana montezumæ*, Baird.—Head as wide as long. Body generally smooth, except pustulation on the sides and sometimes above. No fold of skin, either on the sides or around the tympanum. Tympanum about size of eye; but little variation with sexes. Large vocal vesicles on each side behind jaws. Tongue broad, cornua short. Palatine protuberances close together. Toes not webbed beyond middle of last phalanges on the external sides. Color purplish olive above, grayish below, with crowded spots or vermiculations of whitish all over the body. In young specimens, rounded, areolated, dark blotches on the back and foreleg. Size, that of *Rana pipiens* of Holbrook.

Hab. City of Mexico.

12. *Rana septentrionalis*, Baird.—Body stout, depressed. Skin not tuberculated, but uneven. A broad depressed ridge on each side of back; none intermediate; a branch of same round the tympanum, meeting a thickening from the jaw. Hand much longer than forearm. Femur and tibia nearly equal, about half the length of the body, and less than the hind foot. Foot large; terminal joint of middle toe free; that of the others free only on the inner side. Above light greenish olive, vermiculated with lighter, and with a few large dark blotches posteriorly. Beneath yellow, unblotched. No line on sides of the jaw. Two inches long.

Hab. Northern Minnesota.

13. *Rana sinuata*, Baird.—Body rather stout; tympanum three-fourths the size of eye. Palatine teeth small, ranging with the centres of inner nares. Skin pitted all over with minute pores, with scattered glandules beneath; an indistinct fold of skin on each side of back, none intermediate; granulation of buttocks indistinct. Femur not half the length of body, rather longer than tibia; hind foot considerably longer than the tibia. Above and on sides purplish brown, with

sinuations or coarse vermiculations of yellow. Beneath silvery white. Legs transversely barred. Two and a half inches long.
Hab. Sacketts Harbor, N. Y.

14. *Rana pretiosa*, B. and G.—Female. Body thick and stout; head short, broader than long. Tympanum not two-thirds the length of the eye. Tongue large. Palatine teeth minute, posterior to the inner nares. Skin leathery, covered with asperities, except on inner surfaces, even on the sole of the foot. A depressed ridge of skin on each side, none intermediate; a glandular ridge along the upper jaw. Femur not half the length of the body; tibia about equal to it, but shorter than the hind foot. Terminal joint of longest toe free, next margined, and web generally extending between the tips of the toes on one side, and the last articulation on the other. Shortest toe rather more than one-third the length of the hind foot, both measured from the tarsus. Above yellowish brown, with rounded dark blotches. Sides dusky; dorsal ridge lighter; a light line along the posterior ridge of the upper jaw. Faint indications of a dark area about the tympanum; a few spots about the nostrils. Beneath yellowish white, obsoletely marmorated with brown. About two and a half inches long.
Syn. *Rana pretiosa* B. and G., Proc. Acad. Nat. Sc. Phila., vi. 378.
Hab. Washington Territory.

15. *Rana cantabrigensis*, Baird.—Above yellowish brown. A dark vitta through the eye, margined below by whitish. Lateral fold of skin light colored, as is also a median dorsal line extending from the snout to the anus. A narrow light line along the posterior faces of the thigh and leg. Tibia half the length of body. General appearance and size of *R. sylvatica*.
Hab. Cambridge, Mass. (Collection of Prof. Agassiz.)

16. *Rana boylii*, Baird.—A broad depressed ridge of skin on each side of back. Skin finely tubercular above. Head broader than long. Tympanum scarcely evident, pustulated. Tibia more than half the length of body; hind foot less than half this length; webbed entirely to the horny tips; outer toe decidedly longer than the third. An elongated tubercle at base of inner toe, with another opposite to it. Above dull reddish olivaceous, with indistinct blotches on the back, and fascia on the legs. Beneath yellowish, mottled anteriorly. Two inches long.
Hab. California (interior.)

17. *Scaphiopus couchii*, Baird.—Outer toe but little shorter than the third. Hand nearly as long as forearm. Above grayish ash, with dark markings. A dark line down the back from each orbit, in connection with other markings, causing a slight similarity of pattern to *Hyla versicolor*. Beneath white. An inch long.
Hab. Coahuila and Tamaulipas.

On Fossil Coniferous Wood, from Prince Edward Island.

By J. W. DAWSON.

Under the impression that any facts relating to the formation which has afforded the interesting reptilian fragment recently described by Dr. Leidy in the Journal of this Academy, will prove interesting, I beg leave to communicate the following results of microscopic examinations of the coniferous wood referred to in my note appended to Dr. Leidy's paper.

I may premise that Prince Edward Island, which extends in an east and west direction about 130 miles, with an extreme breadth of about 35 miles, consists almost entirely of bright red sandstones, similar to the matrix of Dr. Leidy's fossil, with occasional bands of red clay, conglomerate and arenaceous and concretionary limestone. Over a large part of the island, these beds dip at very small angles to the northward. There are, however, some tracts in which the beds undulate to the southward and south-east. These red rocks, in their mineral character, much resemble the new red sandstone of Cornwallis and other places in Nova Scotia, and Dr. Gesner, in his Report on the Geology of Prince Edward Island,* notices the occurrence of trap dykes at two localities on the northern coast, a circumstance which still farther increases the resemblance. There are, however, a few places in which beds occur which much resemble the upper parts of the coal formation of Nova Scotia, and it is in these localities chiefly, though I believe not exclusively, that the coniferous wood in question occurs, along with a few other vegetable fragments, for the most part very imperfectly preserved. Some interest, therefore, attaches to these fragments of fossilized wood, as a means of comparison between the oldest portions of the red sandstone formation of Prince Edward Island, and the inferior members of the coal formation on the opposite coasts of Nova Scotia and New Brunswick, in which coniferous wood is also of very frequent occurrence.

1. *Coniferous wood from Gallas or Gallows Point, west side of Orwell Bay.*—At this place, which I visited in 1842, the following beds appear in descending order, the dip being to E. S. E. at angles of 6° to 8°: red and brownish sandstones, gray sandstone with bands of concretionary limestone, and containing carbonized vegetable fragments, some of them resembling *calamites*, but without joints, gray and brown shales or indurated clays; brownish sandstone, with large trunks of trees silicified. One of these trunks measured three feet in its greatest diameter; they are prostrate and somewhat flattened. I have no doubt that these rocks underlie the ordinary red sandstones of the island, and Dr. Gesner, who examined them in 1847, takes the same view, affirming them to be carboniferous, and stating that he found in them *calamites* and *stigmaria*, which, if well characterized specimens, would go far to confirm that conclusion.

My specimens of fossil wood from this place are perfectly silicified, and of a dark clove-brown color. They are much fissured in the direction of the medullary rays, and the fissures are filled with flesh colored sulphate of barytes. Under the microscope, transverse slices show a somewhat dense tissue of quadrangular cells arranged in rows. Longitudinal slices in the direction of the medullary rays, show parallel elongated cells, medullary rays not strongly marked, and traces of hexagonal discs of the Araucarian type on the walls of the cells. Two rows of these discs occupy the whole breadth of a cell.

2. *Specimens from Des Sables and Crapaud.*—At these localities the only rocks seen are the ordinary red sandstones, and the coniferous wood is found only in loose fragments on the surface. From the large quantity scattered over the fields, and the general scarcity of travelled boulders in this part of the island, I have no doubt that it now lies over or near its original site. The specimens from this place are dense and without fissures, and have a structure quite similar to that of the wood from Gallas Point, though not in so perfect preservation.

3. *A specimen from some part of the south shore of Prince Edward Island,* now in the collection of the Puton Literary Society. This specimen was obtained from a person who stated that it was a portion of a large trunk. It still retains in its crevices remnants of the matrix of coarse reddish sandstone. It is cracked in lines radiating from the centre, and is perforated by numerous vermicular holes, now somewhat flattened, but which were probably the burrows either of *Teredines* or xylophagous larvæ. Some parts of this specimen retain their structure in a very perfect condition. It is of precisely the same character with that already described, and shows one or two rows of discs on each cell.

All these specimens probably belong to the same genus, and perhaps to the same species of coniferous trees; and they all differ materially from the coniferous wood of the coal formation. I have slices of the latter from various parts of New Brunswick, Nova Scotia and Cape Breton, some of them from the newest beds of the coal formation. All of them are of much coarser texture than the specimens from Prince Edward Island. The cells are wider, and usually with three or even four rows of discs, and the medullary tissue is more strongly marked. In the closeness of the cellular tissue, fewer rows of discs, and fineness of the medullary rays, the Prince Edward Island specimens, though distinctly of the Araucarian type, approach more nearly to the modern pines of this country than to those of the coal formation. They therefore afford no proof that these lower members of the red sandstone formation of Prince Edward Island are of carboniferous date, but would rather tend to connect them with the overlying beds which have afforded the remains of the *Bathygnathus borealis*. The occurrence, however, in this position, of rocks so nearly resembling those of the upper coal formation, renders it probable that no very sudden or marked physical changes intervened between the deposition of the latter and that of the new red sandstones, and thus furnish an argument in favor of the *Permian* date of this last deposit.*

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* 1847.

Description of a species of Crane found in Wisconsin, presumed to be new.

By WILLIAM DUDLEY, of Madison, Wisconsin.

GRUS HOYIANUS, *nobis*.

Form.—Size large; second primary longest, first and second nearly equal; tail two inches longer than the folded wings; numerous large feathers arise from the base of each wing, elevated and droop down over the tail, giving the bird an ostrich-like appearance. Head densely clothed with feathers to base of bill; no *naked skin*.

Dimensions.—Length of wing from flexure 23 inches; tarsi 11 5-10 inches; middle toe 5 inches, hind toe just reaches the ground; bill 5 inches.

Color.—Head and upper half of neck light ferruginous; on the breast, back and upper tail coverts are a few scattering feathers tipped with the same; primaries black, remaining parts white. Legs black.

Observation.—This fine large crane was killed on Sugar River, in Dane Co., Wisconsin, and is now in the Museum of the Wisconsin Natural History Association. Sex not known. It is named in honor of my worthy friend Dr. P. R. Hoy, of Racine, Wisconsin, whose untiring industry and zeal in Natural History have added much to science.

Description of Fossil Trees in the coal rocks near Greensburgh, Westmoreland county, Pennsylvania.

By ALFRED T. KING, M. D.

Throughout nearly the whole of Western Pennsylvania, but more abundant in particular localities, may be found fragments of immense silicified trees lying on the surface of the ground. About seven miles east of Greensburgh there is a remarkable locality. Here may be seen immense logs from six to eight feet long, and from one to four feet in diameter, strewed over acres of ground. After the closest examination, I have been unable to find any very clear indications of high vegetable organization in these silicified trees. Indeed I have been unable, after the closest scrutiny, to discover a single specimen of fossil plant in our vast carboniferous series, of higher organization than vascular *Cryptogamia*. I might, perhaps, except some specimens, which I first saw a few weeks since in Beaver county, Pa., of *Trigonocarpum?* This is the fruit of a tree, which some have supposed to be allied to the Palms; of this, however, there is still great doubt and uncertainty.

Many of the specimens of silicified wood contain numerous and beautiful crystals of quartz scattered throughout their interior structure, which would seem to indicate that the silicifying process must have taken place whilst the wood was immersed in water of high temperature.

Whilst excavating a tunnel on the Pennsylvania Railroad near Greensburgh, a stratum of very compact sandstone of about fifteen feet in thickness was opened, which contained vast quantities of trunks and limbs of trees, some permeated with silicious and pyritous matter, whilst others have left only their imprints, the woody matter having been converted into coal, which forms a thin but beautiful pellicle, covering the impressions of the plants. These trunks and limbs are of all sizes, from an inch to nearly three feet in circumference, strewed about, and piled upon each other in the most irregular manner, and so numerous that scarcely a fragment of rock was thrown out which did not contain either a vegetable impression or a silicified stem.

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* For description of the Newer Coal Formation of Nova Scotia, see Journal of London Geol. Soc. vol. 1. p. 322; and Taylor's Statistics of Coal, p. 196.

Although in the shale above, vast piles of detached fern leaves were found, belonging principally to the genus *Neuropteris*, accompanied with numerous impressions of *Calamites*, yet no species of fern was discovered in the sandstone, with the exception of two specimens, both of which belonged to distinct genera. The one was a *Pecopteris*, and the other was the *Cyclopteris trichomanoides*.

Among the numerous arborescent fossil plants which were found in this sandstone, was an entire tree of immense magnitude, lying prostrate, about four feet above the Pittsburgh seam of coal, and about thirty feet beneath the surface. The part which was removed measured twenty six feet in length, and two feet ten inches in circumference at the base. From the size of the two main branches which enter the rock on the opposite side, I infer that this tree may have been from forty to sixty feet in height. At the base, it was much flattened by the pressure of the superincumbent weight, but strange as it may seem, the branches still retained nearly their original cylindrical form. It was entirely enveloped in a coating of pure bituminous coal, varying from a quarter of an inch to one inch in thickness. Its interior was filled with sand, mixed with sulphuret and carbonate of iron, which much increased its weight, but there were no indications of vegetable structure. The thin vegetable band, which alone remained converted into pure bituminous coal, may have surrounded an axis of more perishable material, which, when the tree was removed from its original position by the storms or the waves, rapidly decayed. Its hollow interior would necessarily be filled with sand, broken shale or other sediment which was brought by large rivers into that turbulent sea, the bed of which was gradually subsiding. This view is corroborated by the fact, that the rock in which this plant is found imbedded, and which constituted its matrix, presents an entirely different appearance in color, and in some degree in lithological character, from that which fills the interior of the fossil tree. Although there were numerous, but irregular longitudinal flutings, both along the main trunk and its branches, yet I could discover no indications of those beautiful scars, so characteristic of *arborescent ferns*, and of the genus *Sigillaria*, which indicate the spots where the petioles of the leaves articulated with the stem; and hence I infer that this tree should not be referred to either of those families of plants.

The question naturally arises, to which of the three great divisions of the vegetable kingdom do these fossil trees belong. Do they belong to *arborescent ferns*, *gigantic palms* or lofty pines? Are they of exogenous or endogenous growth?

It has been said by fossil botanists, that true exogenæ and endogenæ have been found in the carboniferous rocks of Europe. I have, therefore, been much interested in discovering some clear indications of these highest forms of vegetable structure, in the coal measures in this country; but I have thus far failed, unless the specimens to which I have already alluded, should on further examination, prove exceptions.

I am aware that M. Brongniart has placed the Sigillariæ among the exogenæ, but with all due deference to his high authority, I must say that I have been unable to find in that family of fossil plants any evidence of pith, bark, concentric rings, medullary rays, or other indications of so high a structure.

Since writing the above, I have made another examination of the specimens of fossil trees, and believe that I was at first mistaken in regard to some of them being branches. The rock in which they were found had been blasted, and consequently the fossil trees were much broken. The largest entire piece which I saw was not more than four or five feet in length. These facts may have some bearing upon their position in the vegetable scale.

Description of fossil fruit found in the Carboniferous Rocks of Beaver County, Pa.

By ALFRED T. KING, M. D., of Greensburg, Pa.

Mr. Mendenhall, of New Brighton, showed me several specimens of fossil fruit imbedded in solid sandstone, belonging to the carboniferous series of that neighborhood. And through the kindness of George W. Tyler, Esq., editor of the Boston Herald, I procured a specimen for description.

These specimens bore considerable resemblance, both in form and size, to the fruit of the Butternut, *Juglans cinerea.*

There have been found in the coal strata in Leicestershire, England, a number of species of a three cornered fruit, to which the generic name *Higonocarpum* has been given. Possibly, the specimen which I am about to describe, may be referred to that genus.

This is a drupaceous fruit, of an ovoidal shape, from two inches and a quarter to three inches in length, and from one inch and three quarters to two inches and a half in breadth, and weighs from two and a quarter to three ounces. Its external surface is nearly covered with a thin coating of bituminous coal; a large portion of which, however, adheres to its matrix. This coal was formed, I presume, by the carbonization of its *pericarp.* Its interior is filled with coarse grained sand, similar to the rock in which it was imbedded. The *epicarp* is formed of three nearly equal valves, joined by three prominent sutures, uniting in a point at the apex. Between the sutures are seen a number of nearly parallel and prominent longitudinal striæ, which gracefully curve so as to meet in a point at the distal extremity.

In all the specimens which I saw, there is a deep depression or excavation at the base, where the fruit was attached, in all probability, to a peduncle.

This fruit is not *triquetrous,* as the name *Trigonocarpum* seems to indicate, but strictly *ovoidal,* sometimes nearly *obovoidal,* having three prominent sutures joining the three valves of the epicarp.

It was found in Beaver County, Pa., about three miles from the town of New Brighton, in a thick stratum of compact, but coarse grained sandstone, near the middle of the carboniferous series.

Should this belong to the genus *Trigonocarpum,* I propose calling it *Trigonocarpum carbonarium.*

Descriptions of new Birds of Northern Mexico.

By D. N. COUCH, U. S. Army.

1. CORVUS CRYPTOLEUCUS.

Female. *Form.*—Bill short, high at base, compressed; nostrils covered with flat, bristle-like feathers, which are about two-thirds as long as the bill. Wings long, fourth primary longest, first short; tail moderate, rounded. About the size of or rather larger than the common crow of North America, (*Corvus americanus.*)

Color. Entirely black, with violet and purple reflexions. Feathers of the neck before and behind, and of the back, pure white at their bases and for about two-thirds of their length, being, in fact, white tipped with black. Bill and feet black. Iris yellowish brown.

Total length from tip of bill to end of tail 18¾; wing 13½; expanse of wings 33; tail 8 inches.

Locality. State of Tamaulipas, Mexico; March, 1853.

Obs. Not abundant, though occasionally seen.

2. ICTERUS SCOTTII.

Male. Bill moderate, scarcely curved; tip acute, not compressed. Legs and toes moderate. Wings rounded; second and third primaries longest, first shorter than the fourth and longer than the fifth.

Color. Head, neck, breast, forehead, wings, tip of tail and upper central tail feathers to tip of upper coverts, black. Upper primary and under wing coverts, sides, under surface of body, under and upper tail coverts, rump, and posterior portion of back, bright yellow; sides under the wings greenish yellow. Tips and bases of secondary wing coverts white, forming along the tips a defined stripe, the white on the base being covered by the primary coverts; exterior edge of tips of tertiary quills white; tips of exterior tail feathers slightly tipped with dull white. Bill black; base of lower mandible bluish lead. Feet very dark slate.

Total length 8¼; tip to tip 11¾; wing from carpal joint 4; tail 3¾ inches.

Locality. Western New Leon and Coahuila; April, 1853.

Obs. Plentiful, common. Song varied and highly melodious. An immature specimen of this species has the black on the head and neck maculated with olive; wings, central tail feathers and tips dark ferruginous, and the yellow substituted by a light olive, which is darkest on the rump and lightest on the abdomen, where it is dull yellow.

I have named this handsome bird as a slight token of my high regard for Major General Winfield Scott, Commander in Chief of the U. S. Army.

3. STRUTHUS ATRIMENTALIS.

Male. Small; bill short, conic; wing short, rounded, third and fourth primaries longest and nearly equal; tail long, graduated: legs slender.

Color. Chin, lores and narrow frontal band black. Head above and neck, rump and entire under parts cinereous, palest and nearly white on the abdomen. Back ferruginous, each feather with a dark central line; quills and tail feathers brownish black, both edged externally with white. Bill light brownish red; feet dark; iris dark brown.

Total length 5½; wings 2½; wings from tip to tip 7¾; tail 3 inches.

Locality. Aqua Nueva, State of Coahuila; May, 1853.

The Report of the Publication Committee for 1853 was read and adopted.

ELECTION.

John Vaughan Merrick, Esq., and John J. Vanderkemp, M. D., of Philadelphia, were elected *Members*, and Prof. Daniel Kirkwood, of Newark, Delaware, and Waldo J. Burnett, M. D., of Boston, Mass., were elected *Correspondents.*